

Sequence Listing

<110> Ashkenazi, Avi J.
Baker, Kevin P.
Botstein, David
Desnoyers, Luc
Eaton, Dan L.
Ferrara, Napoleone
Fong, Sherman
Gerber, Hanspeter
Gerritsen, Mary E.
Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Kljavin, Ivar J.
Napier, Mary A.
Pan, James
Paoni, Nicholas F.
Roy, Margaret Ann
Stewart, Timothy A.
Tumas, Daniel
Watanabe, Colin K.
Williams, P. Mickey
Wood, William I.
Zhang, Zemin

<120> Secreted and Transmembrane Polypeptides and Nucleic
Acids Encoding the Same

<130> P2730P1C5

<150> 60/049787

<151> 1997-06-16

<150> 60/062250

<151> 1997-10-17

<150> 60/065186

<151> 1997-11-12

<150> 60/065311

<151> 1997-11-13

<150> 60/066770

<151> 1997-11-24

<150> 60/075945

<151> 1998-02-25

<150> 60/078910

<151> 1998-03-20

<150> 60/083322

<151> 1998-04-28

<150> 60/084600

<151> 1998-05-07

<150> 60/087106

<151> 1998-05-28

<150> 60/087607

<151> 1998-06-02
 <150> 60/087609
 <151> 1998-06-02
 <150> 60/087759
 <151> 1998-06-02
 <150> 60/087827
 <151> 1998-06-03
 <150> 60/088021
 <151> 1998-06-04
 <150> 60/088025
 <151> 1998-06-04
 <150> 60/088026
 <151> 1998-06-04
 <150> 60/088028
 <151> 1998-06-04
 <150> 60/088029
 <151> 1998-06-04
 <150> 60/088030
 <151> 1998-06-04
 <150> 60/088033
 <151> 1998-06-04
 <150> 60/088326
 <151> 1998-06-04
 <150> 60/088167
 <151> 1998-06-05
 <150> 60/088202
 <151> 1998-06-05
 <150> 60/088212
 <151> 1998-06-05
 <150> 60/088217
 <151> 1998-06-05
 <150> 60/088655
 <151> 1998-06-09
 <150> 60/088734
 <151> 1998-06-10
 <150> 60/088738
 <151> 1998-06-10
 <150> 60/088742
 <151> 1998-06-10
 <150> 60/088810
 <151> 1998-06-10
 <150> 60/088824

<151> 1998-06-10
<150> 60/088826
<151> 1998-06-10

<150> 60/088858
<151> 1998-06-11

<150> 60/088861
<151> 1998-06-11

<150> 60/088876
<151> 1998-06-11

<150> 60/089105
<151> 1998-06-12

<150> 60/089440
<151> 1998-06-16

<150> 60/089512
<151> 1998-06-16

<150> 60/089514
<151> 1998-06-16

<150> 60/089532
<151> 1998-06-17

<150> 60/089538
<151> 1998-06-17

<150> 60/089598
<151> 1998-06-17

<150> 60/089599
<151> 1998-06-17

<150> 60/089600
<151> 1998-06-17

<150> 60/089653
<151> 1998-06-17

<150> 60/089801
<151> 1998-06-18

<150> 60/089907
<151> 1998-06-18

<150> 60/089908
<151> 1998-06-18

<150> 60/089947
<151> 1998-06-19

<150> 60/089948
<151> 1998-06-19

<150> 60/089952
<151> 1998-06-19

<150> 60/090246

<151> 1998-06-22
<150> 60/090252
<151> 1998-06-22

<150> 60/090254
<151> 1998-06-22

<150> 60/090349
<151> 1998-06-23

<150> 60/090355
<151> 1998-06-23

<150> 60/090429
<151> 1998-06-24

<150> 60/090431
<151> 1998-06-24

<150> 60/090435
<151> 1998-06-24

<150> 60/090444
<151> 1998-06-24

<150> 60/090445
<151> 1998-06-24

<150> 60/090472
<151> 1998-06-24

<150> 60/090535
<151> 1998-06-24

<150> 60/090540
<151> 1998-06-24

<150> 60/090542
<151> 1998-06-24

<150> 60/090557
<151> 1998-06-24

<150> 60/090676
<151> 1998-06-25

<150> 60/090678
<151> 1998-06-25

<150> 60/090690
<151> 1998-06-25

<150> 60/090694
<151> 1998-06-25

<150> 60/090695
<151> 1998-06-25

<150> 60/090696
<151> 1998-06-25

<150> 60/090862

<151> 1998-06-26

<150> 60/090863
<151> 1998-06-26

<150> 60/091360
<151> 1998-07-01

<150> 60/091478
<151> 1998-07-02

<150> 60/091544
<151> 1998-07-01

<150> 60/091519
<151> 1998-07-02

<150> 60/091626
<151> 1998-07-02

<150> 60/091633
<151> 1998-07-02

<150> 60/091978
<151> 1998-07-07

<150> 60/091982
<151> 1998-07-07

<150> 60/092182
<151> 1998-07-09

<150> 60/092472
<151> 1998-07-10

<150> 60/091628
<151> 1998-07-02

<150> 60/091646
<151> 1998-07-02

<150> 60/091673
<151> 1998-07-02

<150> 60/093339
<151> 1998-07-20

<150> 60/094651
<151> 1998-07-30

<150> 60/095282
<151> 1998-08-04

<150> 60/095285
<151> 1998-08-04

<150> 60/095302
<151> 1998-08-04

<150> 60/095318
<151> 1998-08-04

<150> 60/095321

<151> 1998-08-04
<150> 60/095301
<151> 1998-08-04

<150> 60/095325
<151> 1998-08-04

<150> 60/095916
<151> 1998-08-10

<150> 60/095929
<151> 1998-08-10

<150> 60/096012
<151> 1998-08-10

<150> 60/096143
<151> 1998-08-11

<150> 60/096146
<151> 1998-08-11

<150> 60/096329
<151> 1998-08-12

<150> 60/096757
<151> 1998-08-17

<150> 60/096766
<151> 1998-08-17

<150> 60/096768
<151> 1998-08-17

<150> 60/096773
<151> 1998-08-17

<150> 60/096791
<151> 1998-08-17

<150> 60/096867
<151> 1998-08-17

<150> 60/096891
<151> 1998-08-17

<150> 60/096894
<151> 1998-08-17

<150> 60/096895
<151> 1998-08-17

<150> 60/096897
<151> 1998-08-17

<150> 60/096949
<151> 1998-08-18

<150> 60/096950
<151> 1998-08-18

<150> 60/096959

<151> 1998-08-18
<150> 60/096960
<151> 1998-08-18

<150> 60/097022
<151> 1998-08-18

<150> 60/097141
<151> 1998-08-19

<150> 60/097218
<151> 1998-08-20

<150> 60/097661
<151> 1998-08-24

<150> 60/097952
<151> 1998-08-26

<150> 60/097954
<151> 1998-08-26

<150> 60/097955
<151> 1998-08-26

<150> 60/098014
<151> 1998-08-26

<150> 60/097971
<151> 1998-08-26

<150> 60/097974
<151> 1998-08-26

<150> 60/097978
<151> 1998-08-26

<150> 60/097986
<151> 1998-08-26

<150> 60/097979
<151> 1998-08-26

<150> 60/098525
<151> 1998-08-31

<150> 60/100634
<151> 1998-09-16

<150> 60/100858
<151> 1998-09-17

<150> 60/113296
<151> 1998-12-22

<150> 60/123957
<151> 1999-03-12

<150> 60/141037
<151> 1999-06-23

<150> 60/143048

<151> 1999-07-07

<150> 60/144758

<151> 1999-07-20

<150> 60/145698

<151> 1999-07-26

<150> 60/146222

<151> 1999-07-28

<150> 60/149396

<151> 1999-08-17

<150> 60/158663

<151> 1999-10-08

<150> 60/213637

<151> 2000-06-23

<150> 60/230978

<151> 2000-09-07

<150> 08/743698

<151> 1996-11-06

<150> 08/876698

<151> 1997-06-16

<150> 08/965056

<151> 1997-11-05

<150> 09/105413

<151> 1998-06-26

<150> 09/168978

<151> 1998-10-07

<150> 09/187368

<151> 1998-11-06

<150> 09/202054

<151> 1998-12-07

<150> 09/218517

<151> 1998-12-22

<150> 09/254311

<151> 1999-03-03

<150> 09/254460

<151> 1999-03-09

<150> 09/267213

<151> 1999-03-12

<150> 09/284291

<151> 1999-04-12

<150> 09/380137

<151> 1999-08-25

<150> 09/380138

<151> 1998-08-25
<150> 09/380139
<151> 1999-08-25

<150> 09/403296
<151> 1999-10-18

<150> 09/423844
<151> 1999-11-12

<150> 09/664610
<151> 2000-09-18

<150> 09/665350
<151> 2000-09-18

<150> 09/709238
<151> 2000-11-08

<150> 09/808689
<151> 2001-03-14

<150> 09/854816
<151> 2001-05-15

<150> 09/866028
<151> 2001-05-25

<150> 09/866034
<151> 2001-05-25

<150> 09/872035
<151> 2001-06-01

<150> 09/882636
<151> 2001-06-14

<150> 09/941,992
<151> 2001-08-28

<150> PCT/US97/20069
<151> 1997-11-05

<150> PCT/US98/19330
<151> 1998-09-16

<150> PCT/US98/19437
<151> 1998-09-17

<150> PCT/US98/21141
<151> 1998-10-07

<150> PCT/US98/25108
<151> 1998-12-01

<150> PCT/US99/00106
<151> 1999-01-05

<150> PCT/US99/05028
<151> 1999-03-08

<150> PCT/US99/12252

<151> 1999-06-02
<150> PCT/US99/21090
<151> 1999-09-15
<150> PCT/US99/21547
<151> 1999-09-15
<150> PCT/US99/28313
<151> 1999-11-30
<150> PCT/US99/28301
<151> 1999-12-01
<150> PCT/US99/28634
<151> 1999-12-01
<150> PCT/US99/30095
<151> 1999-12-16
<150> PCT/US99/30911
<151> 1999-12-20
<150> PCT/US00/00219
<151> 2000-01-05
<150> PCT/US00/00376
<151> 2000-01-06
<150> PCT/US00/03565
<151> 2000-02-11
<150> PCT/US00/04341
<151> 2000-02-18
<150> PCT/US00/04414
<151> 2000-02-22
<150> PCT/US00/04914
<151> 2000-02-24
<150> PCT/US00/05004
<151> 2000-02-24
<150> PCT/US00/05841
<151> 2000-03-02
<150> PCT/US00/06319
<151> 2000-03-10
<150> PCT/US00/06884
<151> 2000-03-15
<150> PCT/US00/07377
<151> 2000-03-20
<150> PCT/US00/08439
<151> 2000-03-30
<150> PCT/US00/13358
<151> 2000-05-15
<150> PCT/US00/13705

<151> 2000-05-17
 <150> PCT/US00/14042
 <151> 2000-05-22
 <150> PCT/US00/14941
 <151> 2000-05-30
 <150> PCT/US00/15264
 <151> 2000-06-02
 <150> PCT/US00/20710
 <151> 2000-07-28
 <150> PCT/US00/22031
 <151> 2000-08-11
 <150> PCT/US00/23522
 <151> 2000-08-23
 <150> PCT/US00/23328
 <151> 2000-08-24
 <150> PCT/US00/30952
 <151> 2000-11-08
 <150> PCT/US00/32678
 <151> 2000-12-01
 <150> PCT/US01/06520
 <151> 2001-02-28
 <150> PCT/US01/17800
 <151> 2001-06-01
 <150> PCT/US01/19692
 <151> 2001-06-20
 <150> PCT/US01/21066
 <151> 2001-06-29
 <150> PCT/US01/21735
 <151> 2001-07-09
 <160> 532
 <210> 1
 <211> 1943
 <212> DNA
 <213> Homo sapiens
 <400> 1
 cggacgcgtg ggtgcgaggc gaaggtgacc ggggaccgag catttccagat 50
 ctgctcggta gacctggtgc accaccacca tggttggtgc aaggctggtg 100
 tgtctccgga cactaccttc tagggttttc caccagctt tcaccaaggc 150
 ctcccctggt gtgaagaatt ccatcacgaa gaatcaatgg ctgttaacac 200
 ctagcaggga atatgccacc aaaacaagaa ttgggatccg gcgtgggaga 250
 actggccaag aactcaaaga ggcagcattg gaaccatcga tggaaaaaat 300

attttaaatt gatcagatgg gaagatgggt tgttgctgga ggggctgctg 350
 ttggtcttgg agcattgtgc tactatggct tgggactgtc taatgagatt 400
 ggagctattg aaaaggctgt aatttggcct cagtatgtca aggatagaat 450
 tcattccacc tatatgtact tagcagggag tattggttta acagctttgt 500
 ctgccatagc aatcagcaga acgcctgttc tcatgaactt catgatgaga 550
 ggctcttggg tgacaattgg tgtgaccttt gcagccatgg ttggagctgg 600
 aatgctggta cgatcaatac catatgacca gagcccaggc ccaaagcatc 650
 ttgcttgggt gctacattct ggtgtgatgg gtgcagtggg ggctcctctg 700
 acaatattag ggggtcctct tctcatcaga gctgcatggg acacagctgg 750
 cattgtggga ggctctcca ctgtggcoat gtgtgcgccc agtgaaaagt 800
 ttctgaacat ggggtcaccc ctgggagtgg gcctgggtct cgtctttgtg 850
 tctctattgg gatctatgtt tcttccacct accaccgtgg ctgggtgccac 900
 tctttactca gtggcaatgt acgggtggatt agttcttttc agcatgttcc 950
 ttctgtatga taccagaaa gtaatcaagc gtgcagaagt atcaccaatg 1000
 tatggagtgc aaaaatatga tccattaac tcgatgctga gtatctacat 1050
 ggatacatta aatatattta tgcgagttgc aactatgctg gcaactggag 1100
 gcaacagaaa gaaatgaagt gactcagctt ctggcttctc tgctacatca 1150
 aatatcttgt ttaatggggc agatatgcat taaatagttt gtacaagcag 1200
 ctttcgttga agtttagaag ataagaaaca tgtcatcata tttaaagtgt 1250
 ccggtaatgt gatgcctcag gtctgccttt ttttctggag aataaatgca 1300
 gtaatcctct cccaaataag cacacacatt ttcaattctc atgtttgagt 1350
 gattttaaaa tgttttgggt aatgtgaaaa cttaaagtttg tgtcatgaga 1400
 atgtaagtct tttttctact ttaaaattta gtaggttcac tgagtaacta 1450
 aaatttagca aacctgtgtt tgcataattt tttggagtgc agaattattg 1500
 aattaatgtc ataagtgatt tggagctttg gtaaagggac cagagagaag 1550
 gagtcacctg cagtcttttg tttttttaa tacttagaac ttagcacttg 1600
 tgttattgat tagtgaggag ccagtaagaa acatctgggt atttggaac 1650
 aagtggcat tgttacattc atttgctgaa cttaacaaaa ctgttcatcc 1700
 tgaaacaggc acaggtgatg cattctcctg ctgttgcttc tcagtgtctc 1750
 ctttccaata tagatgtggg catgtttgac ttgtacagaa tgtaaatcat 1800
 acagagaatc cttgatggaa ttatatatgt gtgttttact tttgaatgtt 1850
 acaaaaggaa ataacttta aactattctc aagagaaaat attcaaagca 1900

tgaaatatgt tgctttttcc agaatacaaaa cagtatactc atg 1943

<210> 2

<211> 345

<212> PRT

<213> Homo sapiens

<400> 2

Met	Leu	Ala	Ala	Arg	Leu	Val	Cys	Leu	Arg	Thr	Leu	Pro	Ser	Arg	
1				5					10					15	
Val	Phe	His	Pro	Ala	Phe	Thr	Lys	Ala	Ser	Pro	Val	Val	Lys	Asn	
				20					25					30	
Ser	Ile	Thr	Lys	Asn	Gln	Trp	Leu	Leu	Thr	Pro	Ser	Arg	Glu	Tyr	
				35					40					45	
Ala	Thr	Lys	Thr	Arg	Ile	Gly	Ile	Arg	Arg	Gly	Arg	Thr	Gly	Gln	
				50					55					60	
Glu	Leu	Lys	Glu	Ala	Ala	Leu	Glu	Pro	Ser	Met	Glu	Lys	Ile	Phe	
				65					70					75	
Lys	Ile	Asp	Gln	Met	Gly	Arg	Trp	Phe	Val	Ala	Gly	Gly	Ala	Ala	
				80					85					90	
Val	Gly	Leu	Gly	Ala	Leu	Cys	Tyr	Tyr	Gly	Leu	Gly	Leu	Ser	Asn	
				95					100					105	
Glu	Ile	Gly	Ala	Ile	Glu	Lys	Ala	Val	Ile	Trp	Pro	Gln	Tyr	Val	
				110					115					120	
Lys	Asp	Arg	Ile	His	Ser	Thr	Tyr	Met	Tyr	Leu	Ala	Gly	Ser	Ile	
				125					130					135	
Gly	Leu	Thr	Ala	Leu	Ser	Ala	Ile	Ala	Ile	Ser	Arg	Thr	Pro	Val	
				140					145					150	
Leu	Met	Asn	Phe	Met	Met	Arg	Gly	Ser	Trp	Val	Thr	Ile	Gly	Val	
				155					160					165	
Thr	Phe	Ala	Ala	Met	Val	Gly	Ala	Gly	Met	Leu	Val	Arg	Ser	Ile	
				170					175					180	
Pro	Tyr	Asp	Gln	Ser	Pro	Gly	Pro	Lys	His	Leu	Ala	Trp	Leu	Leu	
				185					190					195	
His	Ser	Gly	Val	Met	Gly	Ala	Val	Val	Ala	Pro	Leu	Thr	Ile	Leu	
				200					205					210	
Gly	Gly	Pro	Leu	Leu	Ile	Arg	Ala	Ala	Trp	Tyr	Thr	Ala	Gly	Ile	
				215					220					225	
Val	Gly	Gly	Leu	Ser	Thr	Val	Ala	Met	Cys	Ala	Pro	Ser	Glu	Lys	
				230					235					240	
Phe	Leu	Asn	Met	Gly	Ala	Pro	Leu	Gly	Val	Gly	Leu	Gly	Leu	Val	
				245					250					255	
Phe	Val	Ser	Ser	Leu	Gly	Ser	Met	Phe	Leu	Pro	Pro	Thr	Thr	Val	
				260					265					270	
Ala	Gly	Ala	Thr	Leu	Tyr	Ser	Val	Ala	Met	Tyr	Gly	Gly	Leu	Val	

	275		280		285
Leu Phe Ser Met	Phe Leu Leu Tyr Asp	Thr Gln Lys Val Ile Lys			
	290	295		300	
Arg Ala Glu Val	Ser Pro Met Tyr Gly	Val Gln Lys Tyr Asp Pro			
	305	310		315	
Ile Asn Ser Met	Leu Ser Ile Tyr Met	Asp Thr Leu Asn Ile Phe			
	320	325		330	
Met Arg Val Ala	Thr Met Leu Ala Thr	Gly Gly Asn Arg Lys Lys			
	335	340		345	

<210> 3
 <211> 43
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 3
 tgtaaaacga cggccagtta aatagacctg caattattaa tct 43

<210> 4
 <211> 41
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 4
 caggaaacag ctatgaccac ctgcacacct gcaaattccat t 41

<210> 5
 <211> 3033
 <212> DNA
 <213> Homo sapiens

<400> 5
 gaaggctgcc tcgctgggtcc gaattcgggtg ggcgcacgtc cgcccgtctc 50
 cgccttctgc atcgcggtct cggcggtctc cacctagaca cctaacagtc 100
 gcggagccgg ccgctgctgt aggggggtcgg cacggggagt cgggcggtct 150
 tgtgcatctt ggctacctgt gggtcgaaga tgtcggacat cggagactgg 200
 ttcaggagca tcccggcgat caccgcctat tggttcgccg ccaccgtcgc 250
 cgtgcccttg gtcggcaaac tcggcctcat cagcccggcc tacctcttcc 300
 tctggccoga agccttctt tatcgcttcc agatttggag gccaatcact 350
 gccacctttt atttccctgt gggtcaggga actggatttc tttatttgg 400
 caatttatat ttcttatatc agtattctac gcgacttgaa acaggagctt 450
 ttgatgggag gccagcagac tatttattca tgctcctctt taactggatt 500
 tgcacgtgta ttactggctt agcaatggat atgcagttgc tgatgattcc 550

tctgatcatg tcagtacttt atgtctgggc ccagctgaac agagacatga 600
ttgtatcatt ttggtttgga acacgattta aggctgcta tttaccctgg 650
gttatccttg gattcaacta tatcatcgga ggctcggtta tcaatgagct 700
tattggaaat ctggttggac atctttatatt tttcctaatag ttcagatacc 750
caatggactt gggaggaaga aattttctat ccacacctca gttttgtac 800
cgctggctgc ccagtaggag aggaggagta tcaggatttg gtgtgcccc 850
tgctagcatg aggcgagctg ctgatcagaa tggcggaggc gggagacaca 900
actggggcca gggctttcga cttggagacc agtgaagggg cggcctcggg 950
cagccgctcc tctcaagcca catttctctc cagtgcctggg tgcacttaac 1000
aactgcgttc tggctaacac tgttggacct gaccacact gaatgtagtc 1050
tttcagtacg agacaaagt tcttaaattcc cgaagaaaaa tataagtgtt 1100
ccacaagttt cagcattctc attcaagtcc ttactgctgt gaagaacaaa 1150
taccaactgt gcaaattgca aaactgacta ctttttttg tgtcttctct 1200
tctccccctt ccgtctgaat aatgggtttt agcgggtcct aatctgctgg 1250
cattgagctg gggctgggtc accaaaacct tcccaaaagg accttatctc 1300
tttcttgac acatgcctct ctcccacttt tcccaacccc cacatttgca 1350
actagaaaaa gttgccata aaattgctct gcccttgaca ggttctgtta 1400
tttattgact tttgccaagg ctggtcacaa caatcatatt cagttattt 1450
tccccctttg gtggcagaac tgttaccaat agggggagaa gacagccacg 1500
gatgaagcgt ttctcagctt ttggaattgc ttcgactgac atccgttggt 1550
aaccgtttgc cactcttcag atatttttta taaaaaagt accactgagt 1600
tcatgagggc cacagattgg ttattaatga gatacgaggg ttggtgctgg 1650
gtgtttgttt cctgagctaa gtgatcaaga ctgtagtgga gttgcagcta 1700
acatgggtta ggtttaaacc atgggggatg caccctttg cgtttcata 1750
gtagccctac tggctttgtg tagctggagt agttgggttg ctttgtgtta 1800
ggaggatcca gatcatgttg gctacaggga gatgctctct ttgagaggtc 1850
ctgggcattg attccattt caatctcatt ctggatatgt gttcattgag 1900
taaaggagga gagacctca tacgtattt aaatgtcact tttttgcta 1950
tccccgctt tttggtcatg tttcaattaa ttgtgaggaa ggcgcagctc 2000
ctctctgcac gtagatcatt ttttaaagct aatgtaagca catctaaggg 2050
aataacatga tttaagggtg aaatggctt agaatcattt gggtttgagg 2100
gtgtgttatt ttgagtcag aatgtacaag ctctgtgaat cagaccagct 2150

taaataccca cacctttttt tcgtaggtgg gcttttctta tcagagcttg 2200
 gctcataacc aaataaagtt ttttgaaggc catggctttt cacacagtta 2250
 ttttatttta tgacgttatc tgaaagcaga ctgttaggag cagtattgag 2300
 tggctgtcac actttgaggc aactaaaaag gcttcaaacg ttttgatcag 2350
 tttcttttca ggaaacattg tgctctaaca gtatgactat tctttcccc 2400
 actcttaaac agtgtgatgt gtgttatcct aggaaatgag agttggcaaa 2450
 caacttctca ttttgaatag agtttgtgtg tacttctcca tatttaattt 2500
 atatgataaa ataggtgggg agagtctgaa ccttaactgt catgttttgt 2550
 tgttcatctg tggccacaat aaagtttact tgtaaaattt tagaggccat 2600
 tactccaatt atgttgcacg tacactcatt gtacaggcgt ggagactcat 2650
 tgtatgtata agaataattc tgacagtgag tgacccggag tctctggtgt 2700
 accctcttac cagtcagctg cctgcgagca gtcatttttt cctaaagggt 2750
 tacaagtatt tagaactttt cagttcaggg caaaatgttc atgaagttat 2800
 tcctcttaaa catggttagg aagctgatga cgttattgat tttgtctgga 2850
 ttatgtttct ggaataattt taccaaaaca agctatttga gttttgactt 2900
 gacaaggcaa aacatgacag tggattctct ttacaaatgg aaaaaaaaaa 2950
 tccttatttt gtataaagga cttccctttt tgtaaaactaa tcctttttat 3000
 tggtaaaaaat tgtaaatata aatgtgcaac ttg 3033

<210> 6
 <211> 251
 <212> PRT
 <213> Homo sapiens

<400> 6
 Met Ser Asp Ile Gly Asp Trp Phe Arg Ser Ile Pro Ala Ile Thr
 1 5 10 15
 Arg Tyr Trp Phe Ala Ala Thr Val Ala Val Pro Leu Val Gly Lys
 20 25 30
 Leu Gly Leu Ile Ser Pro Ala Tyr Leu Phe Leu Trp Pro Glu Ala
 35 40 45
 Phe Leu Tyr Arg Phe Gln Ile Trp Arg Pro Ile Thr Ala Thr Phe
 50 55 60
 Tyr Phe Pro Val Gly Pro Gly Thr Gly Phe Leu Tyr Leu Val Asn
 65 70 75
 Leu Tyr Phe Leu Tyr Gln Tyr Ser Thr Arg Leu Glu Thr Gly Ala
 80 85 90
 Phe Asp Gly Arg Pro Ala Asp Tyr Leu Phe Met Leu Leu Phe Asn
 95 100 105

Trp	Ile	Cys	Ile	Val	Ile	Thr	Gly	Leu	Ala	Met	Asp	Met	Gln	Leu
				110					115					120
Leu	Met	Ile	Pro	Leu	Ile	Met	Ser	Val	Leu	Tyr	Val	Trp	Ala	Gln
				125					130					135
Leu	Asn	Arg	Asp	Met	Ile	Val	Ser	Phe	Trp	Phe	Gly	Thr	Arg	Phe
				140					145					150
Lys	Ala	Cys	Tyr	Leu	Pro	Trp	Val	Ile	Leu	Gly	Phe	Asn	Tyr	Ile
				155					160					165
Ile	Gly	Gly	Ser	Val	Ile	Asn	Glu	Leu	Ile	Gly	Asn	Leu	Val	Gly
				170					175					180
His	Leu	Tyr	Phe	Phe	Leu	Met	Phe	Arg	Tyr	Pro	Met	Asp	Leu	Gly
				185					190					195
Gly	Arg	Asn	Phe	Leu	Ser	Thr	Pro	Gln	Phe	Leu	Tyr	Arg	Trp	Leu
				200					205					210
Pro	Ser	Arg	Arg	Gly	Gly	Val	Ser	Gly	Phe	Gly	Val	Pro	Pro	Ala
				215					220					225
Ser	Met	Arg	Arg	Ala	Ala	Asp	Gln	Asn	Gly	Gly	Gly	Gly	Arg	His
				230					235					240
Asn	Trp	Gly	Gln	Gly	Phe	Arg	Leu	Gly	Asp	Gln				
				245					250					

<210> 7

<211> 1373

<212> DNA

<213> Homo sapiens

<400> 7

```

ggggccgcgg tctagggcgg ctacgtgtgt tgccatagcg accattttgc 50
attaactggt tggtagcttc taccctgggg gctgagcgac tgccggccag 100
ctcttccctt actccctctc ggctccttgt ggcccaaagg cctaaccggg 150
gtccggcggt ctggcctagg gatcttcccc gttgcccctt tggggcgga 200
tggtgcgga agaagaagac gaggtggagt gggtagtgga gagcatcgcg 250
gggttctctg gagggccaga ctgggtccat cccatcttgg actttgtgga 300
acagaaatgt gaagttaact gcaaaggagg gcatgtgata actccaggaa 350
gccagagcc ggtgatcttg gtggcctgtg ttccccttgt ttttgatgat 400
gaagaagaaa gcaaattgac ctatacagag attcatcagg aatacaaaga 450
actagttgaa aagctgttag aaggttacct caaagaaatt ggaattaatg 500
aagatcaatt tcaagaagca tgcacttctc ctcttgcaaa gaccataca 550
tcacaggcca ttttgcaacc tgtgttgga gcagaagatt ttactatctt 600
taaagcaatg atgtccaga aaaacattga aatgcagctg caagccattc 650
gaataattca agagagaaat ggtgtattac ctgactgctt aaccgatggc 700

```

tctgatgtgg tcagtgcacct tgaacacgaa gagatgaaaa tcctgaggga 750
 agttcttaga aaatcaaaag aggaatatga ccaggaagaa gaaaggaaga 800
 ggaaaaaaca gttatcagag gctaaaacag aagagcccac agtgcattcc 850
 agtgaagctg caataatgaa taattcccaa ggggatgggtg aacattttgc 900
 acaccacccc tcagaagtta aaatgcattt tgctaatacag tcaatagaac 950
 ctttggaag aaaagtggaa aggtctgaaa cttcctccct cccacaaaaa 1000
 ggctgaaga ttcttggtt agagcatgcg agcattgaag gaccaatagc 1050
 aaacttatca gtacttgga cagaagaact tcggcaacga gaacactatc 1100
 tcaagcagaa gagagataag ttgatgtcca tgagaaagga tatgaggact 1150
 aaacagatac aaaatatgga gcagaaagga aaaccactg gggaggtaga 1200
 ggaaatgaca gagaaaccag aaatgacagc agaggagaag caaacattac 1250
 taaagaggag attgcttgca gagaaactca aagaagaagt tattaataag 1300
 taataattaa gaacaattta acaaaatgga agttcaaatt gtcttaaaaa 1350
 taaattattt agtccttaca ctg 1373

<210> 8

<211> 367

<212> PRT

<213> Homo sapiens

<400> 8

Met	Ala	Ala	Glu	Glu	Glu	Asp	Glu	Val	Glu	Trp	Val	Val	Glu	Ser
1				5					10				15	
Ile	Ala	Gly	Phe	Leu	Arg	Gly	Pro	Asp	Trp	Ser	Ile	Pro	Ile	Leu
				20					25				30	
Asp	Phe	Val	Glu	Gln	Lys	Cys	Glu	Val	Asn	Cys	Lys	Gly	Gly	His
				35					40				45	
Val	Ile	Thr	Pro	Gly	Ser	Pro	Glu	Pro	Val	Ile	Leu	Val	Ala	Cys
				50					55				60	
Val	Pro	Leu	Val	Phe	Asp	Asp	Glu	Glu	Glu	Ser	Lys	Leu	Thr	Tyr
				65					70				75	
Thr	Glu	Ile	His	Gln	Glu	Tyr	Lys	Glu	Leu	Val	Glu	Lys	Leu	Leu
				80					85				90	
Glu	Gly	Tyr	Leu	Lys	Glu	Ile	Gly	Ile	Asn	Glu	Asp	Gln	Phe	Gln
				95					100				105	
Glu	Ala	Cys	Thr	Ser	Pro	Leu	Ala	Lys	Thr	His	Thr	Ser	Gln	Ala
				110					115				120	
Ile	Leu	Gln	Pro	Val	Leu	Ala	Ala	Glu	Asp	Phe	Thr	Ile	Phe	Lys
				125					130				135	
Ala	Met	Met	Val	Gln	Lys	Asn	Ile	Glu	Met	Gln	Leu	Gln	Ala	Ile
				140					145				150	

Arg	Ile	Ile	Gln	Glu	Arg	Asn	Gly	Val	Leu	Pro	Asp	Cys	Leu	Thr	
				155					160					165	
Asp	Gly	Ser	Asp	Val	Val	Ser	Asp	Leu	Glu	His	Glu	Glu	Met	Lys	
				170					175					180	
Ile	Leu	Arg	Glu	Val	Leu	Arg	Lys	Ser	Lys	Glu	Glu	Tyr	Asp	Gln	
				185					190					195	
Glu	Glu	Glu	Arg	Lys	Arg	Lys	Lys	Gln	Leu	Ser	Glu	Ala	Lys	Thr	
				200					205					210	
Glu	Glu	Pro	Thr	Val	His	Ser	Ser	Glu	Ala	Ala	Ile	Met	Asn	Asn	
				215					220					225	
Ser	Gln	Gly	Asp	Gly	Glu	His	Phe	Ala	His	Pro	Pro	Ser	Glu	Val	
				230					235					240	
Lys	Met	His	Phe	Ala	Asn	Gln	Ser	Ile	Glu	Pro	Leu	Gly	Arg	Lys	
				245					250					255	
Val	Glu	Arg	Ser	Glu	Thr	Ser	Ser	Leu	Pro	Gln	Lys	Gly	Leu	Lys	
				260					265					270	
Ile	Pro	Gly	Leu	Glu	His	Ala	Ser	Ile	Glu	Gly	Pro	Ile	Ala	Asn	
				275					280					285	
Leu	Ser	Val	Leu	Gly	Thr	Glu	Glu	Leu	Arg	Gln	Arg	Glu	His	Tyr	
				290					295					300	
Leu	Lys	Gln	Lys	Arg	Asp	Lys	Leu	Met	Ser	Met	Arg	Lys	Asp	Met	
				305					310					315	
Arg	Thr	Lys	Gln	Ile	Gln	Asn	Met	Glu	Gln	Lys	Gly	Lys	Pro	Thr	
				320					325					330	
Gly	Glu	Val	Glu	Glu	Met	Thr	Glu	Lys	Pro	Glu	Met	Thr	Ala	Glu	
				335					340					345	
Glu	Lys	Gln	Thr	Leu	Leu	Lys	Arg	Arg	Leu	Leu	Ala	Glu	Lys	Leu	
				350					355					360	
Lys	Glu	Glu	Val	Ile	Asn	Lys									
				365											

<210> 9
 <211> 418
 <212> DNA
 <213> Homo sapiens

<400> 9
 gggcacagca catgtgaagt ttttgatgat gaagaagaaa gcaaattgac 50
 ctatacagag attcatcagg aatacaaaga actagttgaa aagctgttag 100
 aaggttacct caaagaaatt ggaattaatg aagatcaatt tcaagaagca 150
 tgcacttctc ctottgcaaa gaccataca tcacaggcca tttttgcaac 200
 ctgtgttggc agcagaagat ttactatct ttaaagcaat gatgtccag 250
 aaaaacattg aaatgcagct gcaagccatt cgaataattc aagagagaaa 300

tggtgtatta cctgactgct taaccgatgg ctctgatgtg gtcagtgacc 350
 ttgaacacga agagatgaaa atcctgaggg aagttcttag aaaatcaaaa 400
 gaggaatatg accaggaa 418

<210> 10
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 10
 ttgacctata cagagattca tc 22

<210> 11
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 11
 ctaagaactt ccctcaggat ttt 23

<210> 12
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 12
 atgaagatca atttcaagaa gcatgcactt ctctctttgc 40

<210> 13
 <211> 2886
 <212> DNA
 <213> Homo sapiens

<400> 13
 gcgtgggtttt tgttctgcaa taggcggctt agagggaggg gctttttcgc 50
 ctatacctac tgtagcttct ccacgtatgg accctaaagg ctactgctgc 100
 tactacgggg ctagacagtt actgtctcag ctctaggatg tgcgttcttc 150
 cactagaagc tcttctgagg gaggtaatta aaaaacagtg gaatggaaaa 200
 acagtgctgt agtcatcctg taatatgctc cttgtcaaca atgtatacat 250
 tcctgctagg tgccatattc attgctttta gctcaagtcg catcttacta 300
 gtgaagtatt ctgccaatga agaaaacaag tatgattatc ttccaactac 350
 tgtgaatgtg tgctcagaac tggatgaagct agttttctgt gtgcttgtgt 400
 cattctgtgt tataaagaaa gatcatcaaa gtagaaattt gaaatatgct 450

tcctggaagg aattctctga ttatcatgaag tgggtccattc ctgcctttct 500
 ttatttcctg gataacttga ttgtcttcta tgtcctgtcc tatcttcaac 550
 cagccatggc tgttatcttc tcaaatTTTA gcattataac aacagctctt 600
 ctattcagga tagtgctgaa gaggcgtcta aactggatcc agtgggcttc 650
 cctcctgact ttatttttgt ctattgtggc cttgactgcc gggactaaaa 700
 ctttacagca caacttggca ggacgtggat ttcattcacga tgcctttttc 750
 agcccttcca attcctgcoct tcttttcaga agtgagtgtc ccagaaaaga 800
 caattgtaca gcaaaggaat ggacttttcc tgaagctaaa tggaacacca 850
 cagccagagt tttcagtcac atccgtcttg gcatgggcca tgttcttatt 900
 atagtccagt gttttatttc ttcaatggct aatatctata atgaaaagat 950
 actgaaggag ggggaaccagc tcaactgaaag catcttcata cagaacagca 1000
 aactctatTTT ctttggcatt ctgtttaatg ggctgactct gggccttcag 1050
 aggagtaacc gtgatcagat taagaactgt ggattttttt atggccacag 1100
 tgcattttca gtagccctta tttttgtaac tgcattccag ggcctttcag 1150
 tggcittcat tctgaagtTC ctggataaca tgttccatgt cttgatggcc 1200
 caggttacca ctgtcattat cacaacagtg tctgtcctgg tctttgactt 1250
 caggccctcc ctggaatTTT tcttggaagc cccatcagtc cttctctcta 1300
 tatttatTTTA taatgccagc aagcctcaag ttccggaata cgcacctagg 1350
 caagaaagga tccgagatct aagtggcaat ctttgggagc gttccagtgg 1400
 ggatggagaa gaactagaaa gacttaccaa acccaagagt gatgagtcag 1450
 atgaagatac tttctaaactg gtaccacat agtttgcagc tctcttgaac 1500
 cttattttca cattttcagt gtttgtaata tttatctttt cactttgata 1550
 aaccagaaat gtttctaaat cctaatttc tttgcatata tctagctact 1600
 ccctaaatgg ttccatccaa ggcttagagt acccaaaggc taagaaattc 1650
 taaagaactg atacaggagt aacaatatga agaattcatt aatatctcag 1700
 tacttgataa atcagaaagt tatatgtgca gattattttc cttggccttc 1750
 aagcttccaa aaaacttgta ataatcatgt tagctatagc ttgtatatac 1800
 acatagagat caatttgcca aatattcaca atcatgtagt tctagttttac 1850
 atgccaaagt cttccctttt taacattata aaagctaggt tgtctcttga 1900
 attttgaggc cctagagata gtcattttgc aagtaaagag caacgggacc 1950
 ctttctaaaa acgttgggtg aaggacctaa atacctggcc ataccataga 2000
 tttgggatga tgtagtctgt gctaaatatt ttgctgaaga agcagtttct 2050

cagacacaac atctcagaat ttttaattttt agaaattcat gggaaattgg 2100
 atttttgtaa taatcttttg atgttttaaa cattgggttcc ctagtcacca 2150
 tagttaccac ttgtatttta agtcatttaa acaagccacg gtggggcctt 2200
 tttctcctca gtttgaggag aaaaatcttg atgtcattac tcctgaatta 2250
 ttacattttg gagaataaga gggcatttta ttttattagt tactaattca 2300
 agctgtgact attgtatatc tttccaagag ttgaaatgct ggcttcagaa 2350
 tcataccaga ttgtcagtga agctgatgcc taggaacttt taaagggatc 2400
 ctttcaaaag gatcacttag caaacacatg ttgactttta actgatgtat 2450
 gaatattaat actctaaaaa tagaaagacc agtaatatat aagtcacttt 2500
 acagtgctac ttcacactta aaagtgcagtg gtatttttca tgggtattttg 2550
 catgcagcca gttaactctc gtagatagag aagtcaggtg atagatgata 2600
 ttaaaaatta gcaaacaaaa gtgacttgct caggggtcatg cagctgggtg 2650
 atgatagaag agtgggcctt aactggcagg cctgtatgtt tacagactac 2700
 catactgtaa atatgagctt tatgggtgtca ttctcagaaa cttatacatt 2750
 tctgctctcc tttctcctaa gtttcatgca gatgaatata aggtaatata 2800
 ctattatata attcatttgt gatatccaca ataatatgac tggcaagaat 2850
 tggtggaat ttgtaattaa aataattatt aaacct 2886

<210> 14

<211> 424

<212> PRT

<213> Homo sapiens

<400> 14

Met	Glu	Lys	Gln	Cys	Cys	Ser	His	Pro	Val	Ile	Cys	Ser	Leu	Ser
1				5					10					15
Thr	Met	Tyr	Thr	Phe	Leu	Leu	Gly	Ala	Ile	Phe	Ile	Ala	Leu	Ser
				20					25					30
Ser	Ser	Arg	Ile	Leu	Leu	Val	Lys	Tyr	Ser	Ala	Asn	Glu	Glu	Asn
				35					40					45
Lys	Tyr	Asp	Tyr	Leu	Pro	Thr	Thr	Val	Asn	Val	Cys	Ser	Glu	Leu
				50					55					60
Val	Lys	Leu	Val	Phe	Cys	Val	Leu	Val	Ser	Phe	Cys	Val	Ile	Lys
				65					70					75
Lys	Asp	His	Gln	Ser	Arg	Asn	Leu	Lys	Tyr	Ala	Ser	Trp	Lys	Glu
				80					85					90
Phe	Ser	Asp	Phe	Met	Lys	Trp	Ser	Ile	Pro	Ala	Phe	Leu	Tyr	Phe
				95					100					105
Leu	Asp	Asn	Leu	Ile	Val	Phe	Tyr	Val	Leu	Ser	Tyr	Leu	Gln	Pro
				110					115					120

Ala Met Ala Val	Ile Phe Ser Asn Phe	Ser Ile Ile Thr Thr	Ala
	125	130	135
Leu Leu Phe Arg	Ile Val Leu Lys Arg	Arg Leu Asn Trp Ile	Gln
	140	145	150
Trp Ala Ser Leu	Leu Thr Leu Phe Leu	Ser Ile Val Ala Leu	Thr
	155	160	165
Ala Gly Thr Lys	Thr Leu Gln His Asn	Leu Ala Gly Arg Gly	Phe
	170	175	180
His His Asp Ala	Phe Phe Ser Pro Ser	Asn Ser Cys Leu Leu	Phe
	185	190	195
Arg Ser Glu Cys	Pro Arg Lys Asp Asn	Cys Thr Ala Lys Glu	Trp
	200	205	210
Thr Phe Pro Glu	Ala Lys Trp Asn Thr	Thr Ala Arg Val Phe	Ser
	215	220	225
His Ile Arg Leu	Gly Met Gly His Val	Leu Ile Ile Val Gln	Cys
	230	235	240
Phe Ile Ser Ser	Met Ala Asn Ile Tyr	Asn Glu Lys Ile Leu	Lys
	245	250	255
Glu Gly Asn Gln	Leu Thr Glu Ser Ile	Phe Ile Gln Asn Ser	Lys
	260	265	270
Leu Tyr Phe Phe	Gly Ile Leu Phe Asn	Gly Leu Thr Leu Gly	Leu
	275	280	285
Gln Arg Ser Asn	Arg Asp Gln Ile Lys	Asn Cys Gly Phe Phe	Tyr
	290	295	300
Gly His Ser Ala	Phe Ser Val Ala Leu	Ile Phe Val Thr Ala	Phe
	305	310	315
Gln Gly Leu Ser	Val Ala Phe Ile Leu	Lys Phe Leu Asp Asn	Met
	320	325	330
Phe His Val Leu	Met Ala Gln Val Thr	Thr Val Ile Ile Thr	Thr
	335	340	345
Val Ser Val Leu	Val Phe Asp Phe Arg	Pro Ser Leu Glu Phe	Phe
	350	355	360
Leu Glu Ala Pro	Ser Val Leu Leu Ser	Ile Phe Ile Tyr Asn	Ala
	365	370	375
Ser Lys Pro Gln	Val Pro Glu Tyr Ala	Pro Arg Gln Glu Arg	Ile
	380	385	390
Arg Asp Leu Ser	Gly Asn Leu Trp Glu	Arg Ser Ser Gly Asp	Gly
	395	400	405
Glu Glu Leu Glu	Arg Leu Thr Lys Pro	Lys Ser Asp Glu Ser	Asp
	410	415	420
Glu Asp Thr Phe			

<210> 15
<211> 755
<212> DNA
<213> Homo sapiens

<400> 15
cgtgcctgcg caatgggtgt cgggtccgct ttttcccaat coggacgtaa 50
tcgtgggtttt tgttctgcaa taggcggctt agagggaggg gctttttcgc 100
ctatacctac tgtagcttct ccacgtatgg accctaaagg ctactgctgc 150
tactacgggg ctagacagtt actgtctcag ctctaggatg tgcgttcttc 200
cactagaagc tcttctgagg gaggtaatta aaaaacagtg gaatggaaaa 250
acagtgctgt agtcatcctg taatatgctc cttgtcaaca atgtatacat 300
tcctgctagg tgccataatc attgctttta gctcaagtcg catcttacta 350
gtgaagtatt ctgccaatga agaaaacaag tatgattatc ttccaactac 400
tgtgaatgtg tgctcagaac tggatgaagc agttttctgt gtgcttgtgt 450
cattctgtgt tataaagaaa gatcatcaaa gtagaaattt gaaatatgct 500
tcctggaagg aattctctga tttcatgaag tgggccattc ctgcctttct 550
ttatttcctg gataaactga ttgtcttcta tgtcctgtcc tatcttcaac 600
cagccatggc tgttatcttc tcaaatttta gcattataac aacagctctt 650
ctattcagga tagtgctgaa gaggcgtcta aactggatcc agtgggcttc 700
cctcctgact ttatttttgt ctattgtggc cttgactgcc gggactaaaa 750
cttta 755

<210> 16
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 16
ctatacctac tgtagcttct 20

<210> 17
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 17
tcagagaatt ccttccagga 20

<210> 18
<211> 40
<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 18

acagtgtctgt agtcatcctg taatatgctc cttgtcaaca 40

<210> 19

<211> 2142

<212> DNA

<213> Homo sapiens

<400> 19

cggacgcgtg ggcggacgcg tgggcggaac cgtggggccg gcttggctag 50
cgcgcgggcg ccgtggctaa ggctgctacg aagcgagctt gggaggagca 100
gcggcctgcg gggcagagga gcatcccgctc taccaggtcc caagcggcgt 150
ggcccgcggg tcatggccaa aggagaaggc gccgagagcg gctccgcggc 200
ggggctgcta cccaccagca tcctccaaag cactgaacgc ccggcccagg 250
tgaagaaaga accgaaaaag aagaaacaac agttgtctgt ttgcaacaag 300
ctttgctatg cacttggggg agccccctac caggtgacgg gctgtgccct 350
gggtttcttc cttcagatct acctattgga tgtggctcag gtgggccctt 400
tctctgcctc catcatcctg tttgtgggcc gagcctggga tgccatcaca 450
gacccccctg tgggcctctg catcagcaaa tccccctgga cctgcctggg 500
tcgccttatg ccctggatca tcttctccac gccctggcc gtcattgcct 550
acttcctcat ctggttcgtg ccgacttcc cacacggcca gacctattgg 600
tacctgcttt tctattgcct ctttgaaaca atgggtcacgt gtttccatgt 650
tccctactcg gctctacca tgttcatcag caaccgagca gactgagcgg 700
gattctgcca ccgcctatcg gatgactgtg gaagtgtctg gcacagtgc 750
gggcacggcg atccaggac aaatcgtggg ccaagcagac acgccttggt 800
tccaggactt caatagctct acagtagctt caciaagtgc caaccataca 850
catggcacca cttcacacag ggaaacgcaa aaggcatacc tgctggcagc 900
gggggtcatt gtctgtatct atataatctg tgctgtcatc ctgatcctgg 950
gcgtgcggga gcagagagaa ccctatgaag ccagcagtc tgagccaatc 1000
gcctacttcc ggggcctacg gctggtcacg agccacggcc catacatcaa 1050
acttattact ggcttcctct tcacctcctt ggctttcatg ctggtggagg 1100
ggaactttgt cttgttttgc acctacacct tgggcttccg caatgaattc 1150
cagaatctac tcctggccat catgctctcg gccactttaa ccattcccat 1200
ctggcagtgg ttcttgacct ggtttggcaa gaagacagct gtatatgttg 1250

ggatctcatc agcagtgcca tttctcatct tggtagccct catggagagt 1300
 aacctcatca ttacatatgc ggtagctgtg gcagctggca tcagtgtggc 1350
 agctgccttc ttactaccct ggtccatgct gcctgatgtc attgacgact 1400
 tccatctgaa gcagccccac ttccatggaa ccgagcccat cttcttctcc 1450
 ttctatgtct tcttcaccaa gtttgccctc ggagtgtcac tgggcatttc 1500
 taccctcagt ctggactttg cagggtagca gaccctgggc tgctgcagc 1550
 cggaacgtgt caagtttaca ctgaacatgc tcgtgacct ggctcccata 1600
 gttctcatcc tgctgggcct gctgctcttc aaaatgtacc ccattgatga 1650
 ggagaggcgg cggcagaata agaaggccct gcaggcactg agggacgagg 1700
 ccagcagctc tggctgtctca gaaacagact ccacagagct ggctagcatc 1750
 ctctagggcc cgccacgttg cccgaagcca ccatgcagaa ggccacagaa 1800
 gggatcagga cctgtctgcc ggcttctgta gcagctggac tgcaggtgct 1850
 aggaaggga ctgaagactc aaggaggtgg ccaggacac ttgctgtgct 1900
 cactgtgggg ccggtgctc tgtggcctcc tgccctccct ctgctgct 1950
 gtggggccaa gccctggggc tgccactgtg aatatgccaa ggactgatcg 2000
 ggcctagccc ggaacactaa ttagaaaacc ttttttttac agagccta 2050
 taataactta atgactgtgt acatagcaat gtgtgtgtat gtatatgtct 2100
 gtgagctatt aatgttatta attttcataa aagctggaaa gc 2142

<210> 20
 <211> 458
 <212> PRT
 <213> Homo sapiens

<400> 20
 Met Trp Leu Arg Trp Ala Leu Ser Leu Pro Pro Ser Ser Cys Leu
 1 5 10 15
 Trp Ala Glu Pro Gly Met Pro Ser Gln Thr Pro Trp Trp Ala Ser
 20 25 30
 Ala Ser Ala Asn Pro Pro Gly Pro Ala Trp Val Ala Leu Cys Pro
 35 40 45
 Gly Ser Ser Ser Pro Arg Pro Trp Pro Ser Leu Pro Thr Ser Ser
 50 55 60
 Ser Gly Ser Cys Pro Thr Ser His Thr Ala Arg Pro Ile Gly Thr
 65 70 75
 Cys Phe Ser Ile Ala Ser Leu Lys Gln Trp Ser Arg Val Ser Met
 80 85 90
 Phe Pro Thr Arg Leu Ser Pro Cys Ser Ser Ala Thr Glu Gln Thr
 95 100 105

Glu Arg Asp Ser	Ala Thr Ala Tyr Arg	Met Thr Val Glu Val	Leu
	110	115	120
Gly Thr Val Leu	Gly Thr Ala Ile Gln	Gly Gln Ile Val Gly	Gln
	125	130	135
Ala Asp Thr Pro	Cys Phe Gln Asp Phe	Asn Ser Ser Thr Val	Ala
	140	145	150
Ser Gln Ser Ala	Asn His Thr His Gly	Thr Thr Ser His Arg	Glu
	155	160	165
Thr Gln Lys Ala	Tyr Leu Leu Ala Ala	Gly Val Ile Val Cys	Ile
	170	175	180
Tyr Ile Ile Cys	Ala Val Ile Leu Ile	Leu Gly Val Arg Glu	Gln
	185	190	195
Arg Glu Pro Tyr	Glu Ala Gln Gln Ser	Glu Pro Ile Ala Tyr	Phe
	200	205	210
Arg Gly Leu Arg	Leu Val Met Ser His	Gly Pro Tyr Ile Lys	Leu
	215	220	225
Ile Thr Gly Phe	Leu Phe Thr Ser Leu	Ala Phe Met Leu Val	Glu
	230	235	240
Gly Asn Phe Val	Leu Phe Cys Thr Tyr	Thr Leu Gly Phe Arg	Asn
	245	250	255
Glu Phe Gln Asn	Leu Leu Leu Ala Ile	Met Leu Ser Ala Thr	Leu
	260	265	270
Thr Ile Pro Ile	Trp Gln Trp Phe Leu	Thr Arg Phe Gly Lys	Lys
	275	280	285
Thr Ala Val Tyr	Val Gly Ile Ser Ser	Ala Val Pro Phe Leu	Ile
	290	295	300
Leu Val Ala Leu	Met Glu Ser Asn Leu	Ile Ile Thr Tyr Ala	Val
	305	310	315
Ala Val Ala Ala	Gly Ile Ser Val Ala	Ala Ala Phe Leu Leu	Pro
	320	325	330
Trp Ser Met Leu	Pro Asp Val Ile Asp	Asp Phe His Leu Lys	Gln
	335	340	345
Pro His Phe His	Gly Thr Glu Pro Ile	Phe Phe Ser Phe Tyr	Val
	350	355	360
Phe Phe Thr Lys	Phe Ala Ser Gly Val	Ser Leu Gly Ile Ser	Thr
	365	370	375
Leu Ser Leu Asp	Phe Ala Gly Tyr Gln	Thr Arg Gly Cys Ser	Gln
	380	385	390
Pro Glu Arg Val	Lys Phe Thr Leu Asn	Met Leu Val Thr Met	Ala
	395	400	405
Pro Ile Val Leu	Ile Leu Leu Gly Leu	Leu Leu Phe Lys Met	Tyr
	410	415	420

Pro Ile Asp Glu Glu Arg Arg Arg Gln Asn Lys Lys Ala Leu Gln
425 430 435

Ala Leu Arg Asp Glu Ala Ser Ser Ser Gly Cys Ser Glu Thr Asp
440 445 450

Ser Thr Glu Leu Ala Ser Ile Leu
455

<210> 21
<211> 571
<212> DNA
<213> Homo sapiens

<400> 21
gggaaacgca aaaggcatac ctgctggcag cgggggtcat tgtctgtatc 50
tatataatct gtgctgtcat cctgatcctg ggcgtgcggg agcagagaga 100
accctatgaa gccacgacgt ctgagccaat cgcctacttc cggggcctac 150
ggctggatcat gagccacggc ccatacatca aacttattac tggcttcctc 200
ttcacctcct tggctttcat gctggtggag gggaactttg tcttgttttg 250
cacctacacc ttgggcttcc gcaatgaatt ccagaatcta ctcctggcca 300
tcatgctctc ggccacttta accattccca tctggcagtg gttcttgacc 350
cggtttggca agaagacagc tgtatatgtt gggatctcat cagcagtgcc 400
atttctcatc ttggtggccc tcatggagag taacctcatc attacatatg 450
cggtagctgt ggcagctggc atcagtggtg cagctgcctt cttactaccc 500
tgggccatgc tgcctgatgt cattgacgac ttccatctga agcagcccca 550
cttccatgga accgagccca t 571

<210> 22
<211> 1173
<212> DNA
<213> Homo sapiens

<400> 22
ggggcttcgg cgccagcggc cagcgctagt cggctctgga aggatttaca 50
aaaggtgcag gtatgagcag gtctgaagac taacattttg tgaagttgta 100
aaacagaaaa cctgttagaa atgtggtggt ttcagcaagg cctcagtttc 150
cttccttcag cccttgtaat ttggacatct gctgctttca tattttcata 200
cattactgca gtaacactcc accatataga cccggcttta ccttatatca 250
gtgacactgg tacagtagct ccagaaaaat gcttattttg ggcaatgcta 300
aatattgagg cagttttatg cattgctacc atttatgttc gttataagca 350
agttcatgct ctgagtcctg aagagaacgt tatcatcaaa ttaaacaagg 400
ctggccttgt acttgaata ctgagttgtt taggactttc tattgtggca 450

aacttccaga aaacaaccct ttttgctgca catgtaagtg gagctgtgct 500
tacctttgggt atgggctcat tatatatgtt tgttcagacc atcctttcct 550
accaaattgca gcccaaaatc catggcaaac aagtcttctg gatcagactg 600
ttgttgggtta tctgggtgtg agtaagtgca cttagcatgc tgacttgctc 650
atcagttttg cacagtggca attttgggac tgatttagaa cagaaactcc 700
attggaaccc cgaggacaaa ggttatgtgc ttcacatgat cactactgca 750
gcagaatgggt ctatgtcatt ttccttcttt gggtttttcc tgacttacat 800
tcgtgatttt cagaaaattt ctttacgggt ggaagccaat ttacatggat 850
taaccctcta tgacactgca ctttgcccta ttaacaatga acgaacacgg 900
ctactttcca gagatatattg atgaaaggat aaaatatttc tgtaatgatt 950
atgattctca gggattgggg aaaggttcac agaagttgct tattcttctc 1000
tgaaattttc aaccacttaa tcaaggctga cagtaacact gatgaatgct 1050
gataatcagg aaacatgaaa gaagccattt gatagattat tctaaaggat 1100
atcatcaaga agactattaa aaacacctat gcctatactt ttttatctca 1150
gaaaataaag tcaaaaagact atg 1173

<210> 23
<211> 266
<212> PRT
<213> Homo sapiens

<400> 23
Met Trp Trp Phe Gln Gln Gly Leu Ser Phe Leu Pro Ser Ala Leu
1 5 10 15
Val Ile Trp Thr Ser Ala Ala Phe Ile Phe Ser Tyr Ile Thr Ala
20 25 30
Val Thr Leu His His Ile Asp Pro Ala Leu Pro Tyr Ile Ser Asp
35 40 45
Thr Gly Thr Val Ala Pro Glu Lys Cys Leu Phe Gly Ala Met Leu
50 55 60
Asn Ile Ala Ala Val Leu Cys Ile Ala Thr Ile Tyr Val Arg Tyr
65 70 75
Lys Gln Val His Ala Leu Ser Pro Glu Glu Asn Val Ile Ile Lys
80 85 90
Leu Asn Lys Ala Gly Leu Val Leu Gly Ile Leu Ser Cys Leu Gly
95 100 105
Leu Ser Ile Val Ala Asn Phe Gln Lys Thr Thr Leu Phe Ala Ala
110 115 120
His Val Ser Gly Ala Val Leu Thr Phe Gly Met Gly Ser Leu Tyr
125 130 135

Met	Phe	Val	Gln	Thr	Ile	Leu	Ser	Tyr	Gln	Met	Gln	Pro	Lys	Ile	140	145	150
His	Gly	Lys	Gln	Val	Phe	Trp	Ile	Arg	Leu	Leu	Leu	Val	Ile	Trp	155	160	165
Cys	Gly	Val	Ser	Ala	Leu	Ser	Met	Leu	Thr	Cys	Ser	Ser	Val	Leu	170	175	180
His	Ser	Gly	Asn	Phe	Gly	Thr	Asp	Leu	Glu	Gln	Lys	Leu	His	Trp	185	190	195
Asn	Pro	Glu	Asp	Lys	Gly	Tyr	Val	Leu	His	Met	Ile	Thr	Thr	Ala	200	205	210
Ala	Glu	Trp	Ser	Met	Ser	Phe	Ser	Phe	Phe	Gly	Phe	Phe	Leu	Thr	215	220	225
Tyr	Ile	Arg	Asp	Phe	Gln	Lys	Ile	Ser	Leu	Arg	Val	Glu	Ala	Asn	230	235	240
Leu	His	Gly	Leu	Thr	Leu	Tyr	Asp	Thr	Ala	Pro	Cys	Pro	Ile	Asn	245	250	255
Asn	Glu	Arg	Thr	Arg	Leu	Leu	Ser	Arg	Asp	Ile					260	265	

<210> 24
 <211> 485
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 14, 484
 <223> unknown base

<400> 24
 cggacgcttg ggcngcgcca gcggccagcg ctagtgcgtc tggtaagtgc 50
 ctgatgccga gttccgtctc tcgggtcttt tcttggtccc aggcaaagcg 100
 gagcggagat cctcaaacgg cctagtgtct cgcgcttccg gagaaaatca 150
 gcggtctaataa taattcctct ggtttggtga agcagttacc aagaatcttc 200
 aaccctttcc cacaaaagct aattgagtac acgttctctg tgagtacacg 250
 ttctgttgga ttacaaaag gtgcaggtat gagcaggtct gaagactaac 300
 attttggtgaa gttgtaaaac agaaaacctg ttagaaatgt ggtgggtttca 350
 gcaaggcctc agtttccttc cttcagccct tgtaatttgg acatctgctg 400
 ctttcatatt ttcatacatt actgcagtaa cactccacca tatagaccgc 450
 gctttacott atatcagtga cactggtaca gtanc 485

<210> 25
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 25
acctgttaga aatgtggtgg ttccagcaag gcctcagttt 40

<210> 26
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 26
ggagatagct gctatgggtt cttcaggcac aacttaacat gggaag 46

<210> 27
<211> 1399
<212> DNA
<213> Homo sapiens

<400> 27
cccacgcgtc cgcccgccgc tgcgtcccgg agtgcaagtg agcttctcgg 50
ctgccccgcg ggccgggggtg cggagccgac atgcgccccgc ttctcggcct 100
ccttctggtc ttcgccggct gcaccttgc cttgtacttg ctgtcgacgc 150
gactgccccg cgggcccaga ctgggctcca ccgaggaggc tggaggcagg 200
tcgctgtggt tcccctccga cctggcagag ctgcgggagc tctctgaggt 250
ccttcgagag taccggaagg agcaccaggc ctacgtgttc ctgctcttct 300
gcggcgccta cctctacaaa cagggctttg ccatccccgg ctccagcttc 350
ctgaatgttt tagctggtgc cttgtttggg ccatggctgg ggcttctgct 400
gtgctgtgtg ttgacctcgg tgggtgccac atgctgctac ctgctctcca 450
gtatttttgg caaacagttg gtggtgtcct actttcctga taaagtggcc 500
ctgctgcaga gaaaggtgga ggagaacaga aacagcttgt tttttttctt 550
attgtttttg agacttttcc ccatgacacc aaactgggtc ttgaacctct 600
cggccccaat tctgaacatt cccatcgtgc agttcttctt ctcagttctt 650
atcggtttga tcccatataa tttcatctgt gtgcagacag ggtccatcct 700
gtcaacccta acctctctgg atgctctttt ctctgggac actgtcttta 750
agctgttggc cattgccatg gtggcattaa ttcttggaac cctcattaaa 800
aaatttagtc agaaaacatct gcaattgaat gaaacaagta ctgctaata 850
tatacacagt agaaaagaca catgatctgg attttctgtt tgccacatcc 900
ctggactcag ttgcttattt gtgtaatgga tgtggctctc taaagcccct 950
cattgttttt gattgccttc tataggatgat gtggacactg tgcataatg 1000

tgcagtgtct tttcagaaaag gacactctgc tcttgaaggt gtattacatc 1050
 aggttttcaa accagccctg gtgtagcaga cactgcaaca gatgcctcct 1100
 agaaaatgct gtttgtggcc gggcgcggtg gctcagcct gtaatcccag 1150
 cactttggga ggccgaggcc ggtgattcac aaggtcagga gttcaagacc 1200
 agcctggcca agatggtgaa atcctgtctc taataaaaat acaaaaatta 1250
 gccaggcgtg gtggcaggca cctgtaatcc cagctactcg ggaggctgag 1300
 gcaggagaat tgcttgaacc aaggtggcag aggttgcagt aagccaagat 1350
 cacaccactg cactccagcc tgggtgatag agtgagacac tgtcttgac 1399

<210> 28

<211> 264

<212> PRT

<213> Homo sapiens

<400> 28

Met	Arg	Pro	Leu	Leu	Gly	Leu	Leu	Leu	Val	Phe	Ala	Gly	Cys	Thr	1	5	10	15
Phe	Ala	Leu	Tyr	Leu	Leu	Ser	Thr	Arg	Leu	Pro	Arg	Gly	Arg	Arg	20	25	30	
Leu	Gly	Ser	Thr	Glu	Glu	Ala	Gly	Gly	Arg	Ser	Leu	Trp	Phe	Pro	35	40	45	
Ser	Asp	Leu	Ala	Glu	Leu	Arg	Glu	Leu	Ser	Glu	Val	Leu	Arg	Glu	50	55	60	
Tyr	Arg	Lys	Glu	His	Gln	Ala	Tyr	Val	Phe	Leu	Leu	Phe	Cys	Gly	65	70	75	
Ala	Tyr	Leu	Tyr	Lys	Gln	Gly	Phe	Ala	Ile	Pro	Gly	Ser	Ser	Phe	80	85	90	
Leu	Asn	Val	Leu	Ala	Gly	Ala	Leu	Phe	Gly	Pro	Trp	Leu	Gly	Leu	95	100	105	
Leu	Leu	Cys	Cys	Val	Leu	Thr	Ser	Val	Gly	Ala	Thr	Cys	Cys	Tyr	110	115	120	
Leu	Leu	Ser	Ser	Ile	Phe	Gly	Lys	Gln	Leu	Val	Val	Ser	Tyr	Phe	125	130	135	
Pro	Asp	Lys	Val	Ala	Leu	Leu	Gln	Arg	Lys	Val	Glu	Glu	Asn	Arg	140	145	150	
Asn	Ser	Leu	Phe	Phe	Phe	Leu	Leu	Phe	Leu	Arg	Leu	Phe	Pro	Met	155	160	165	
Thr	Pro	Asn	Trp	Phe	Leu	Asn	Leu	Ser	Ala	Pro	Ile	Leu	Asn	Ile	170	175	180	
Pro	Ile	Val	Gln	Phe	Phe	Phe	Ser	Val	Leu	Ile	Gly	Leu	Ile	Pro	185	190	195	
Tyr	Asn	Phe	Ile	Cys	Val	Gln	Thr	Gly	Ser	Ile	Leu	Ser	Thr	Leu	200	205	210	

Thr	Ser	Leu	Asp	Ala	Leu	Phe	Ser	Trp	Asp	Thr	Val	Phe	Lys	Leu
				215					220					225
Leu	Ala	Ile	Ala	Met	Val	Ala	Leu	Ile	Pro	Gly	Thr	Leu	Ile	Lys
				230					235					240
Lys	Phe	Ser	Gln	Lys	His	Leu	Gln	Leu	Asn	Glu	Thr	Ser	Thr	Ala
				245					250					255
Asn	His	Ile	His	Ser	Arg	Lys	Asp	Thr						
				260										

<210> 29
 <211> 1292
 <212> DNA
 <213> Homo sapiens

<400> 29
 ccgaggcgagg aggagcccga gggggcgcgga gccccgcatg aatcattgta 50
 gtcaatcatt ttccagttct cagccgctca gttgtgatca agggacacgt 100
 ggtttccgaa ctgccagctc agaataggaa aataacttgg gattttatat 150
 tggaagacat ggatcttgct gccaacgaga tcagcattta tgacaaactt 200
 tcagagactg ttgatttggg gagacagacc ggccatcagt gtggcatgtc 250
 agagaaggca attgaaaaat ttatcagaca gctgctggaa aagaatgaac 300
 ctgagagacc cccccgcag tatcctctcc ttatagttgt gtataagggt 350
 ctgcaacct tgggattaat cttgctcact gcctactttg tgattcaacc 400
 tttcagccca ttagcacctg agccagtgtt ttctggagct cacacctggc 450
 gctcactcat ccatcacatt aggctgatgt ccttgcccat tgccaagaag 500
 tacatgtcag aaaataaggg agttcctctg catgggggtg atgaagacag 550
 accctttcca gactttgacc cctggtggac aaacgactgt gagcagaatg 600
 agtcagagcc cattcctgcc aactgcactg gctgtgcca gaaacacctg 650
 aaggtgatgc tcctggaaga cggcccaagg aaatttgaga ggctccatcc 700
 actggtgatc aagacgggaa agccctgtt ggaggaagag attcagcatt 750
 ttttgtgcca gtacctgag gcgacagaag gcttctctga agggtttttc 800
 gccaagtggg ggcgctgctt tctgagcgg tggttcccat ttccttatcc 850
 atggaggaga cctctgaaca gatcacaaat gttacgtgag ctttttctctg 900
 ttttactca cctgccatct ccaaaagatg cctctttaaa caagtgtctc 950
 tttcttcacc cagaacctgt tgtggggagt aagatgcata agatgcctga 1000
 cctatttatc attggcagcg gtgaggccat gttgcagctc atccctccct 1050
 tccagtgccg aagacattgt cagtctgtgg ccatgccaat agagccaggg 1100
 gatatcggct atgtogacac caccactgg aaggtctacg ttatagccag 1150

aggggtccag cctttggtca tctgcatgg aaccgctttc tcagaactgt 1200
 aggaaataga actgtgcaca ggaacagctt ccagagccga aaaccagggtt 1250
 gaaaggggaa aaataaaaaac aaaaacgatg aaactgcaaa aa 1292

<210> 30
 <211> 347
 <212> PRT
 <213> Homo sapiens

<400> 30
 Met Asp Leu Ala Ala Asn Glu Ile Ser Ile Tyr Asp Lys Leu Ser
 1 5 10 15
 Glu Thr Val Asp Leu Val Arg Gln Thr Gly His Gln Cys Gly Met
 20 25 30
 Ser Glu Lys Ala Ile Glu Lys Phe Ile Arg Gln Leu Leu Glu Lys
 35 40 45
 Asn Glu Pro Gln Arg Pro Pro Pro Gln Tyr Pro Leu Leu Ile Val
 50 55 60
 Val Tyr Lys Val Leu Ala Thr Leu Gly Leu Ile Leu Leu Thr Ala
 65 70 75
 Tyr Phe Val Ile Gln Pro Phe Ser Pro Leu Ala Pro Glu Pro Val
 80 85 90
 Leu Ser Gly Ala His Thr Trp Arg Ser Leu Ile His His Ile Arg
 95 100 105
 Leu Met Ser Leu Pro Ile Ala Lys Lys Tyr Met Ser Glu Asn Lys
 110 115 120
 Gly Val Pro Leu His Gly Gly Asp Glu Asp Arg Pro Phe Pro Asp
 125 130 135
 Phe Asp Pro Trp Trp Thr Asn Asp Cys Glu Gln Asn Glu Ser Glu
 140 145 150
 Pro Ile Pro Ala Asn Cys Thr Gly Cys Ala Gln Lys His Leu Lys
 155 160 165
 Val Met Leu Leu Glu Asp Ala Pro Arg Lys Phe Glu Arg Leu His
 170 175 180
 Pro Leu Val Ile Lys Thr Gly Lys Pro Leu Leu Glu Glu Glu Ile
 185 190 195
 Gln His Phe Leu Cys Gln Tyr Pro Glu Ala Thr Glu Gly Phe Ser
 200 205 210
 Glu Gly Phe Phe Ala Lys Trp Trp Arg Cys Phe Pro Glu Arg Trp
 215 220 225
 Phe Pro Phe Pro Tyr Pro Trp Arg Arg Pro Leu Asn Arg Ser Gln
 230 235 240
 Met Leu Arg Glu Leu Phe Pro Val Phe Thr His Leu Pro Phe Pro
 245 250 255

Lys	Asp	Ala	Ser	Leu	Asn	Lys	Cys	Ser	Phe	Leu	His	Pro	Glu	Pro	
				260					265		.			270	
Val	Val	Gly	Ser	Lys	Met	His	Lys	Met	Pro	Asp	Leu	Phe	Ile	Ile	
				275					280					285	
Gly	Ser	Gly	Glu	Ala	Met	Leu	Gln	Leu	Ile	Pro	Pro	Phe	Gln	Cys	
				290					295					300	
Arg	Arg	His	Cys	Gln	Ser	Val	Ala	Met	Pro	Ile	Glu	Pro	Gly	Asp	
				305					310					315	
Ile	Gly	Tyr	Val	Asp	Thr	Thr	His	Trp	Lys	Val	Tyr	Val	Ile	Ala	
				320					325					330	
Arg	Gly	Val	Gln	Pro	Leu	Val	Ile	Cys	Asp	Gly	Thr	Ala	Phe	Ser	
				335					340					345	

Glu Leu

<210> 31
 <211> 478
 <212> DNA
 <213> Homo sapiens

<400> 31
 ccacggtgtc cgttcttcgc ccggcggcag ctgtccccga ggcgggagga 50
 gcccgagggg cgcgagcccc gcatgaatca ttgtagtcaa tcattttcca 100
 gttctcagcc gttcagttgt gatcaaggga cacgtggttt ccgaactgcc 150
 agctcagaat aggaaaataa cttgggattt tatattggaa gacatggatc 200
 ttgctgccaa cgagatcagc atttatgaca aactttcaga gactgttgat 250
 ttggtgagac agaccggcca tcagtgtggc atgtcagaga aggcaattga 300
 aaaatttata agacagctgc tggaaaagaa tgaacctcag agaccccccc 350
 cgcagtatcc tctccttata gttgtgtata aggttctcgc aaccttggga 400
 ttaatcttgc tcaactgccta ctttgtgatt caacctttca gcccattagc 450
 acotgagcca gtgctttgtg gagctcac 478

<210> 32
 <211> 3531
 <212> DNA
 <213> Homo sapiens

<400> 32
 cccacgcgtc cgcccacgcg tccggctgaa cacctcttct ttggagtcag 50
 ccaactgatga ggcagggtcc ccaactgcag ctgcagcagc tgcagcagct 100
 gcagagcgct gctcctggct ggtgccactg gtgcgcacgc tgctagaccg 150
 tgcctatgag ccgctggggc tgcagtgggg actgccctcc ctgccacca 200
 ccaatggcag cccaccttc tttgaagact tccaggcttt ttgtgccaca 250

cccgaatggc gccacttcat cgacaaacag gtacagccaa ccatgtccca 300
 gttcgaaatg gacacgtatg ctaagagcca cgaccttatg tcaggtttct 350
 ggaatgcctg ctatgacatg cttatgagca gtgggcagcg gcgccagtgg 400
 gagcgcgccc agagtcgtcg ggccttccag gagctggtgc tggaacctgc 450
 gcagaggcgg gcgcgcctgg aggggctacg ctacacggca gtgctgaagc 500
 agcaggcaac gcagcactcc atggccctgc tgcactgggg ggcgctgtgg 550
 cgccagctcg ccagcccatg tggggcctgg gcgctgaggg acactcccat 600
 cccccgctgg aaactgtcca gcgccgagac atattcacgc atgcgtctga 650
 agctggtgcc caaccatcac ttcgaccctc acctggaagc cagcgtcttc 700
 cgagacaatc tgggtgaggt tcccctgaca cccaccgagg aggcctcact 750
 gcctctggca gtgaccaaag aggccaaagt gagcacccca cccgagttgc 800
 tgcaggagga ccagctcggc gaggacgagc tggtgagct ggagaccccg 850
 atggaggcag cagaactgga tgagcagcgt gagaagctgg tgctgtcggc 900
 cgagtgccag ctggtgacgg tagtggccgt ggtcccaggc ctgctggagg 950
 tcaccacaca gaatgtatac ttctacgatg gcagcaactga gcgcgtggaa 1000
 accgaggagg gcacgcgcta tgatttccgg cgcacctgg cccagctgcg 1050
 tgaggtccac ctgcggcggt tcaacctgcg ccgttcagca cttgagctct 1100
 tctttatcga tcaggccaac tacttctca acttcccatg caagggtggc 1150
 acgaccccag tctcatctcc tagccagact ccgagacccc agcctggccc 1200
 catcccacc cataccagg tacggaacca ggtgtactcg tggctcctgc 1250
 gcctacggcc cccctctcaa ggctacctaa gcagccgctc ccccaggag 1300
 atgctgcgtg cctcaggcct taccagaaa tgggtacagc gtgagatata 1350
 caacttcgag tacttgatgc aactcaacac cattgcgggg cggacctaca 1400
 atgacctgtc tcagtaccct gtgttccctt gggctcctgca ggactacgtg 1450
 tccccaacct tggacctcag caaccagacc gtcttcggg acctgtctaa 1500
 gccatcgggt gtggtgaacc ccaagcatgc ccagctcgtg agggagaagt 1550
 atgaaagctt tgaggacca gcagggacca ttgacaagtt ccactatggc 1600
 acccactact ccaatgcagc aggcgtgatg cactacctca tccgcgtgga 1650
 gcccttcacc tcctgcacg tccagctgca aagtggccgc tttgactgct 1700
 ccgaccggca gttccactcg gtggcgccag cctggcaggc acgcctggag 1750
 agccctgccg atgtgaagga gctcatcccg gaattcttct actttcctga 1800
 cttcctggag aaccagaacg gttttgacct gggctgtctc cagctgacca 1850

acgagaaggt aggcgatgtg gtgctacccc cgtgggcccag ctctcctgag 1900
 gacttcatcc agcagcaccg ccaggctctg gagtcggagt atgtgtctgc 1950
 acacctacac gagtggatcg acctcatctt tggctacaag cagcgggggc 2000
 cagccgccga ggaggccctc aatgtcttct attactgcac ctatgagggg 2050
 gctgtagacc tggaccatgt gacagatgag cgggaacgga aggctctgga 2100
 gggcattatc agcaactttg ggcagactcc ctgtcagctg ctgaaggagc 2150
 cacatccaac tcggctctca gctgaggaag cagcccatcg ccttgacgcg 2200
 ctggacacta actcacctag catcttccag cacctggacg aactcaaggc 2250
 attcttcgca gaggtgactg tgagtgccag tgggctgctg ggcacccaca 2300
 gctggttgcc ctatgaccgc aacataagca actacttcag cttcagcaaa 2350
 gaccccacca tgggcagcca caagacgcag cgactgctga gtggcccgtg 2400
 ggtgccaggc agtgggtgtg gtggacaagc actggcagtg gccccggatg 2450
 gaaagctgct attcagcggg ggcactggg atggcagcct gcgggtgact 2500
 gcactacccc gtggcaagct gttgagccag ctcagctgcc accttgatgt 2550
 agtaacctgc cttgcaactg acacctgtgg catctacctc atctcaggct 2600
 cccgggacac cacgtgcatg gtgtggcggc tcctgcatca ggggtggtctg 2650
 tcagtaggcc tggcaccaaa gcctgtgcag gtcctgtatg ggcattggggc 2700
 tgcagtgage tgtgtggcca tcagcactga acttgacatg gctgtgtctg 2750
 gatctgagga tggaactgtg atcatacaca ctgtacgccg cggacagttt 2800
 gtagcggcac tacggcctct gggtgccaca ttccctggac ctattttcca 2850
 cctggcattg gggctccgag gccagattgt ggtacagagc tcagcgtggg 2900
 aacgtcctgg ggcccaggtc acctactcct tgcacctgta ttcagtcaat 2950
 gggaagttgc gggcttcact gccctggca gagcagccta cagccctgac 3000
 ggtgacagag gactttgtgt tgcctgggac cgcccagtg cccctgcaca 3050
 tcctccaact aaacacactg ctcccggccg cgctccctt gccatgaag 3100
 gtggccatcc gcagcgtggc cgtgaccaag gagcgcagcc acgtgctggt 3150
 gggcctggag gatggcaagc tcctcgtggt ggtcgcgggg cagccctctg 3200
 aggtgcgcag cagccagttc gcgcggaagc tgtggcggtc ctcgcggcgc 3250
 atctcccagg tgtcctcggg agagacggaa tacaacccta ctgaggcgcg 3300
 ctgaacctgg ccagtccggc tgctcgggcc ccgccccggg caggcctggc 3350
 ccgggaggcc ccgcccagaa gtcggcggga acaccccggg gtgggcagcc 3400
 cagggggtga gcggggccca ccctgccag ctcagggtt ggccggcgat 3450

gttaccacct cagggattgg cgggcggaag tcccgcacct cgccggctga 3500
 ggggccgccc tgagggccag cactggcgtc t 3531

<210> 33
 <211> 1003
 <212> PRT
 <213> Homo sapiens

<400> 33
 Met Ser Gln Phe Glu Met Asp Thr Tyr Ala Lys Ser His Asp Leu
 1 5 10 15
 Met Ser Gly Phe Trp Asn Ala Cys Tyr Asp Met Leu Met Ser Ser
 20 25 30
 Gly Gln Arg Arg Gln Trp Glu Arg Ala Gln Ser Arg Arg Ala Phe
 35 40 45
 Gln Glu Leu Val Leu Glu Pro Ala Gln Arg Arg Ala Arg Leu Glu
 50 55 60
 Gly Leu Arg Tyr Thr Ala Val Leu Lys Gln Gln Ala Thr Gln His
 65 70 75
 Ser Met Ala Leu Leu His Trp Gly Ala Leu Trp Arg Gln Leu Ala
 80 85 90
 Ser Pro Cys Gly Ala Trp Ala Leu Arg Asp Thr Pro Ile Pro Arg
 95 100 105
 Trp Lys Leu Ser Ser Ala Glu Thr Tyr Ser Arg Met Arg Leu Lys
 110 115 120
 Leu Val Pro Asn His His Phe Asp Pro His Leu Glu Ala Ser Ala
 125 130 135
 Leu Arg Asp Asn Leu Gly Glu Val Pro Leu Thr Pro Thr Glu Glu
 140 145 150
 Ala Ser Leu Pro Leu Ala Val Thr Lys Glu Ala Lys Val Ser Thr
 155 160 165
 Pro Pro Glu Leu Leu Gln Glu Asp Gln Leu Gly Glu Asp Glu Leu
 170 175 180
 Ala Glu Leu Glu Thr Pro Met Glu Ala Ala Glu Leu Asp Glu Gln
 185 190 195
 Arg Glu Lys Leu Val Leu Ser Ala Glu Cys Gln Leu Val Thr Val
 200 205 210
 Val Ala Val Val Pro Gly Leu Leu Glu Val Thr Thr Gln Asn Val
 215 220 225
 Tyr Phe Tyr Asp Gly Ser Thr Glu Arg Val Glu Thr Glu Glu Gly
 230 235 240
 Ile Gly Tyr Asp Phe Arg Arg Pro Leu Ala Gln Leu Arg Glu Val
 245 250 255
 His Leu Arg Arg Phe Asn Leu Arg Arg Ser Ala Leu Glu Leu Phe
 260 265 270

Phe	Ile	Asp	Gln	Ala	Asn	Tyr	Phe	Leu	Asn	Phe	Pro	Cys	Lys	Val	
				275					280					285	
Gly	Thr	Thr	Pro	Val	Ser	Ser	Pro	Ser	Gln	Thr	Pro	Arg	Pro	Gln	
				290					295					300	
Pro	Gly	Pro	Ile	Pro	Pro	His	Thr	Gln	Val	Arg	Asn	Gln	Val	Tyr	
				305					310					315	
Ser	Trp	Leu	Leu	Arg	Leu	Arg	Pro	Pro	Ser	Gln	Gly	Tyr	Leu	Ser	
				320					325					330	
Ser	Arg	Ser	Pro	Gln	Glu	Met	Leu	Arg	Ala	Ser	Gly	Leu	Thr	Gln	
				335					340					345	
Lys	Trp	Val	Gln	Arg	Glu	Ile	Ser	Asn	Phe	Glu	Tyr	Leu	Met	Gln	
				350					355					360	
Leu	Asn	Thr	Ile	Ala	Gly	Arg	Thr	Tyr	Asn	Asp	Leu	Ser	Gln	Tyr	
				365					370					375	
Pro	Val	Phe	Pro	Trp	Val	Leu	Gln	Asp	Tyr	Val	Ser	Pro	Thr	Leu	
				380					385					390	
Asp	Leu	Ser	Asn	Pro	Ala	Val	Phe	Arg	Asp	Leu	Ser	Lys	Pro	Ile	
				395					400					405	
Gly	Val	Val	Asn	Pro	Lys	His	Ala	Gln	Leu	Val	Arg	Glu	Lys	Tyr	
				410					415					420	
Glu	Ser	Phe	Glu	Asp	Pro	Ala	Gly	Thr	Ile	Asp	Lys	Phe	His	Tyr	
				425					430					435	
Gly	Thr	His	Tyr	Ser	Asn	Ala	Ala	Gly	Val	Met	His	Tyr	Leu	Ile	
				440					445					450	
Arg	Val	Glu	Pro	Phe	Thr	Ser	Leu	His	Val	Gln	Leu	Gln	Ser	Gly	
				455					460					465	
Arg	Phe	Asp	Cys	Ser	Asp	Arg	Gln	Phe	His	Ser	Val	Ala	Ala	Ala	
				470					475					480	
Trp	Gln	Ala	Arg	Leu	Glu	Ser	Pro	Ala	Asp	Val	Lys	Glu	Leu	Ile	
				485					490					495	
Pro	Glu	Phe	Phe	Tyr	Phe	Pro	Asp	Phe	Leu	Glu	Asn	Gln	Asn	Gly	
				500					505					510	
Phe	Asp	Leu	Gly	Cys	Leu	Gln	Leu	Thr	Asn	Glu	Lys	Val	Gly	Asp	
				515					520					525	
Val	Val	Leu	Pro	Pro	Trp	Ala	Ser	Ser	Pro	Glu	Asp	Phe	Ile	Gln	
				530					535					540	
Gln	His	Arg	Gln	Ala	Leu	Glu	Ser	Glu	Tyr	Val	Ser	Ala	His	Leu	
				545					550					555	
His	Glu	Trp	Ile	Asp	Leu	Ile	Phe	Gly	Tyr	Lys	Gln	Arg	Gly	Pro	
				560					565					570	
Ala	Ala	Glu	Glu	Ala	Leu	Asn	Val	Phe	Tyr	Tyr	Cys	Thr	Tyr	Glu	
				575					580					585	

Gly	Ala	Val	Asp	Leu	Asp	His	Val	Thr	Asp	Glu	Arg	Glu	Arg	Lys	
				590					595					600	
Ala	Leu	Glu	Gly	Ile	Ile	Ser	Asn	Phe	Gly	Gln	Thr	Pro	Cys	Gln	
				605					610					615	
Leu	Leu	Lys	Glu	Pro	His	Pro	Thr	Arg	Leu	Ser	Ala	Glu	Glu	Ala	
				620					625					630	
Ala	His	Arg	Leu	Ala	Arg	Leu	Asp	Thr	Asn	Ser	Pro	Ser	Ile	Phe	
				635					640					645	
Gln	His	Leu	Asp	Glu	Leu	Lys	Ala	Phe	Phe	Ala	Glu	Val	Thr	Val	
				650					655					660	
Ser	Ala	Ser	Gly	Leu	Leu	Gly	Thr	His	Ser	Trp	Leu	Pro	Tyr	Asp	
				665					670					675	
Arg	Asn	Ile	Ser	Asn	Tyr	Phe	Ser	Phe	Ser	Lys	Asp	Pro	Thr	Met	
				680					685					690	
Gly	Ser	His	Lys	Thr	Gln	Arg	Leu	Leu	Ser	Gly	Pro	Trp	Val	Pro	
				695					700					705	
Gly	Ser	Gly	Val	Ser	Gly	Gln	Ala	Leu	Ala	Val	Ala	Pro	Asp	Gly	
				710					715					720	
Lys	Leu	Leu	Phe	Ser	Gly	Gly	His	Trp	Asp	Gly	Ser	Leu	Arg	Val	
				725					730					735	
Thr	Ala	Leu	Pro	Arg	Gly	Lys	Leu	Leu	Ser	Gln	Leu	Ser	Cys	His	
				740					745					750	
Leu	Asp	Val	Val	Thr	Cys	Leu	Ala	Leu	Asp	Thr	Cys	Gly	Ile	Tyr	
				755					760					765	
Leu	Ile	Ser	Gly	Ser	Arg	Asp	Thr	Thr	Cys	Met	Val	Trp	Arg	Leu	
				770					775					780	
Leu	His	Gln	Gly	Gly	Leu	Ser	Val	Gly	Leu	Ala	Pro	Lys	Pro	Val	
				785					790					795	
Gln	Val	Leu	Tyr	Gly	His	Gly	Ala	Ala	Val	Ser	Cys	Val	Ala	Ile	
				800					805					810	
Ser	Thr	Glu	Leu	Asp	Met	Ala	Val	Ser	Gly	Ser	Glu	Asp	Gly	Thr	
				815					820					825	
Val	Ile	Ile	His	Thr	Val	Arg	Arg	Gly	Gln	Phe	Val	Ala	Ala	Leu	
				830					835					840	
Arg	Pro	Leu	Gly	Ala	Thr	Phe	Pro	Gly	Pro	Ile	Phe	His	Leu	Ala	
				845					850					855	
Leu	Gly	Ser	Glu	Gly	Gln	Ile	Val	Val	Gln	Ser	Ser	Ala	Trp	Glu	
				860					865					870	
Arg	Pro	Gly	Ala	Gln	Val	Thr	Tyr	Ser	Leu	His	Leu	Tyr	Ser	Val	
				875					880					885	
Asn	Gly	Lys	Leu	Arg	Ala	Ser	Leu	Pro	Leu	Ala	Glu	Gln	Pro	Thr	
				890					895					900	

Ala	Leu	Thr	Val	Thr	Glu	Asp	Phe	Val	Leu	Leu	Gly	Thr	Ala	Gln	
				905					910					915	
Cys	Ala	Leu	His	Ile	Leu	Gln	Leu	Asn	Thr	Leu	Leu	Pro	Ala	Ala	
				920					925					930	
Pro	Pro	Leu	Pro	Met	Lys	Val	Ala	Ile	Arg	Ser	Val	Ala	Val	Thr	
				935					940					945	
Lys	Glu	Arg	Ser	His	Val	Leu	Val	Gly	Leu	Glu	Asp	Gly	Lys	Leu	
				950					955					960	
Ile	Val	Val	Val	Ala	Gly	Gln	Pro	Ser	Glu	Val	Arg	Ser	Ser	Gln	
				965					970					975	
Phe	Ala	Arg	Lys	Leu	Trp	Arg	Ser	Ser	Arg	Arg	Ile	Ser	Gln	Val	
				980					985					990	
Ser	Ser	Gly	Glu	Thr	Glu	Tyr	Asn	Pro	Thr	Glu	Ala	Arg			
				995					1000						

<210> 34
 <211> 43
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 34
 tgactgcact acccgtggc aagctgttga gccagctcag ctg 43

<210> 35
 <211> 1395
 <212> DNA
 <213> Homo sapiens

<400> 35
 cggacgcgtg ggcggacgcg tgggggctgt gagaaagtgc caataaatac 50
 atcatgcaac cccacggccc accttgtgaa ctctcgtgc ccagggctga 100
 tgtgogtott ccagggctac tcatccaaag gcctaatacca acgttctgtc 150
 ttcaatctgc aaatctatgg ggtcctgggg ctcttctgga cccttaactg 200
 ggtactggcc ctgggccaat gcgtcctcgc tggagccttt gcctccttct 250
 actgggcctt ccacaagccc caggacatcc ctaccttccc cttaatctct 300
 gccttcatcc gcacactccg ttaccacact gggtcattgg catttgagc 350
 cctcatcctg acccttgtgc agatagcccg ggtcatcttg gagtatattg 400
 accacaagct cagaggagtg cagaaccctg tagcccgctg catcatgtgc 450
 tgtttcaagt gctgcctctg gtgtctggaa aaatttatca agttcctaaa 500
 ccgcaatgca tacatcatga tcgccatcta cgggaagaat ttctgtgtct 550
 cagccaaaaa tgcgttcatg ctactcatgc gaaacattgt cagggtggtc 600
 gtcttgaca aagtcacaga cctgctgctg ttctttggga agctgctggt 650

ggtcggaggc gtgggggtcc tgtccttctt tttttctcc ggtcgcatcc 700
 cggggctggg taaagacttt aagagccccc acctcaacta ttactggctg 750
 cccatcatga cctccatcct gggggcctat gtcatcgcca gcggcttctt 800
 cagcgttttc ggcatgtgtg tggacacgct cttcctctgc ttcttggaag 850
 acctggagcg gaacaacggc tccctggacc ggccctacta catgtccaag 900
 agcctttctaa agattctggg caagaagaac gaggcgcccc cggacaacaa 950
 gaagaggaag aagtgacagc tccggccctg atccaggact gcaccccacc 1000
 cccaccgtcc agccatccaa cctcacttcg ccttacaggt ctccattttg 1050
 tggtaaaaaa aggttttagg ccaggcgccg tggtcacgc ctgtaatcca 1100
 acactttgag aggctgaggc gggcggatca cctgagtcag gagttcgaga 1150
 ccagcctggc caacatgggtg aaacctccgt ctctattaaa aatacaaaaa 1200
 ttagccgaga gtggtggcat gcacctgtca tcccagctac tcgggagggt 1250
 gaggcaggag aatcgcttga acccgggagg cagaggttgc agtgagccga 1300
 gatcgcgcca ctgcactcca acctgggtga cagactctgt ctccaaaaca 1350
 aaacaaacaa acaaaaagat tttattaaag atatattgtt aactc 1395

<210> 36

<211> 321

<212> PRT

<213> Homo sapiens

<400> 36

Arg	Thr	Arg	Gly	Arg	Thr	Arg	Gly	Gly	Cys	Glu	Lys	Val	Pro	Ile
1				5					10					15
Asn	Thr	Ser	Cys	Asn	Pro	Thr	Ala	His	Leu	Val	Asn	Ser	Ser	Cys
				20					25					30
Pro	Gly	Leu	Met	Cys	Val	Phe	Gln	Gly	Tyr	Ser	Ser	Lys	Gly	Leu
				35					40					45
Ile	Gln	Arg	Ser	Val	Phe	Asn	Leu	Gln	Ile	Tyr	Gly	Val	Leu	Gly
				50					55					60
Leu	Phe	Trp	Thr	Leu	Asn	Trp	Val	Leu	Ala	Leu	Gly	Gln	Cys	Val
				65					70					75
Leu	Ala	Gly	Ala	Phe	Ala	Ser	Phe	Tyr	Trp	Ala	Phe	His	Lys	Pro
				80					85					90
Gln	Asp	Ile	Pro	Thr	Phe	Pro	Leu	Ile	Ser	Ala	Phe	Ile	Arg	Thr
				95					100					105
Leu	Arg	Tyr	His	Thr	Gly	Ser	Leu	Ala	Phe	Gly	Ala	Leu	Ile	Leu
				110					115					120
Thr	Leu	Val	Gln	Ile	Ala	Arg	Val	Ile	Leu	Glu	Tyr	Ile	Asp	His
				125					130					135

Lys	Leu	Arg	Gly	Val	Gln	Asn	Pro	Val	Ala	Arg	Cys	Ile	Met	Cys	
				140					145					150	
Cys	Phe	Lys	Cys	Cys	Leu	Trp	Cys	Leu	Glu	Lys	Phe	Ile	Lys	Phe	
				155					160					165	
Leu	Asn	Arg	Asn	Ala	Tyr	Ile	Met	Ile	Ala	Ile	Tyr	Gly	Lys	Asn	
				170					175					180	
Phe	Cys	Val	Ser	Ala	Lys	Asn	Ala	Phe	Met	Leu	Leu	Met	Arg	Asn	
				185					190					195	
Ile	Val	Arg	Val	Val	Val	Leu	Asp	Lys	Val	Thr	Asp	Leu	Leu	Leu	
				200					205					210	
Phe	Phe	Gly	Lys	Leu	Leu	Val	Val	Gly	Gly	Val	Gly	Val	Leu	Ser	
				215					220					225	
Phe	Phe	Phe	Phe	Ser	Gly	Arg	Ile	Pro	Gly	Leu	Gly	Lys	Asp	Phe	
				230					235					240	
Lys	Ser	Pro	His	Leu	Asn	Tyr	Tyr	Trp	Leu	Pro	Ile	Met	Thr	Ser	
				245					250					255	
Ile	Leu	Gly	Ala	Tyr	Val	Ile	Ala	Ser	Gly	Phe	Phe	Ser	Val	Phe	
				260					265					270	
Gly	Met	Cys	Val	Asp	Thr	Leu	Phe	Leu	Cys	Phe	Leu	Glu	Asp	Leu	
				275					280					285	
Glu	Arg	Asn	Asn	Gly	Ser	Leu	Asp	Arg	Pro	Tyr	Tyr	Met	Ser	Lys	
				290					295					300	
Ser	Leu	Leu	Lys	Ile	Leu	Gly	Lys	Lys	Asn	Glu	Ala	Pro	Pro	Asp	
				305					310					315	
Asn	Lys	Lys	Arg	Lys	Lys										
				320											

<210> 37
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 37
 tcgtgcccag gggctgatgt gc 22

<210> 38
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 38
 gtctttaccc agccccggga tgcg 24

<210> 39
 <211> 50

<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 39

ggcctaattcc aacgtttctgt cttcaatctg caaatctatg gggtcctggg 50

<210> 40

<211> 1365

<212> DNA

<213> Homo sapiens

<400> 40

gagtcttgac cgccgccggg ctcttggtag ctcagcgcga gcgccaggcg 50

tccggccgcc gtggctatgt tcgtgtccga tttccgcaa gagttctacg 100

aggtggtcca gagccagagg gtccttctct tcgtggcctc ggacgtggat 150

gctctgtgtg cgtgcaagat ccttcaggcc ttgttccagt gtgaccacgt 200

gcaatatacg ctggttcag tttctgggtg gcaagaactt gaaactgcat 250

ttcttgagca taaagaacag tttcattatt ttattctcat aaactgtgga 300

gctaattgtag acctattgga tattcttcaa cctgatgaag aactatatt 350

ctttgtgtgt gactcccata ggccagtcaa tgtcgtcaat gtatacaacg 400

ataccagat caaattactc attaacaag atgatgacct tgaagttccc 450

gcctatgaag acatcttcag ggatgaagag gaggatgaag agcattcagg 500

aatgacagt gatgggtcag agccttctga gaagcgcaca cggttagaag 550

aggagatagt ggagcaaacc atgcggagga ggcagcggcg agagtgggag 600

gcccgagaa gagacatcct ctttgactac gagcagtatg aatatcatgg 650

gacatcgtca gccatggtga tgtttgagct ggcttgatg ctgtccaagg 700

acctgaatga catgctgtgg tgggccatcg ttggactaac agaccagtgg 750

gtgcaagaca agatcactca aatgaaatac gtgactgatg ttggtgtcct 800

gcagcgcac gtttcccgcc acaaccaccg gaacgaggat gaggagaaca 850

cactctccgt ggactgcaca cggatctcct ttgagtatga cctccgcctg 900

gtgctctacc agcactggtc cctccatgac agcctgtgca acaccagcta 950

taccgcagcc aggttcaagc tgtggtctgt gcatggacag aagcggctcc 1000

aggagtctct tgcagacatg ggtcttcccc tgaagcaggt gaagcagaag 1050

ttccaggcca tggacatctc cttgaaggag aatttgcgga aatgattga 1100

agagtctgca aataaatttg ggatgaagga catgcgcgtg cagactttca 1150

gcattcattt tgggttcaag cacaagtttc tggccagcga cgtggtcttt 1200

gccaccatgt ctttgatgga gagccccgag aaggatggct cagggacaga 1250
 tcacttcatc caggctctgg acagcctctc caggagtaac ctggacaagc 1300
 tgtaccatgg cctggaactc gccaagaagc agctgcgagc caccacagcag 1350
 accattgccca gctgc 1365

<210> 41
 <211> 566
 <212> PRT
 <213> Homo sapiens

<400> 41
 Met Phe Val Ser Asp Phe Arg Lys Glu Phe Tyr Glu Val Val Gln
 1 5 10 15
 Ser Gln Arg Val Leu Leu Phe Val Ala Ser Asp Val Asp Ala Leu
 20 25 30
 Cys Ala Cys Lys Ile Leu Gln Ala Leu Phe Gln Cys Asp His Val
 35 40 45
 Gln Tyr Thr Leu Val Pro Val Ser Gly Trp Gln Glu Leu Glu Thr
 50 55 60
 Ala Phe Leu Glu His Lys Glu Gln Phe His Tyr Phe Ile Leu Ile
 65 70 75
 Asn Cys Gly Ala Asn Val Asp Leu Leu Asp Ile Leu Gln Pro Asp
 80 85 90
 Glu Asp Thr Ile Phe Phe Val Cys Asp Ser His Arg Pro Val Asn
 95 100 105
 Val Val Asn Val Tyr Asn Asp Thr Gln Ile Lys Leu Leu Ile Lys
 110 115 120
 Gln Asp Asp Asp Leu Glu Val Pro Ala Tyr Glu Asp Ile Phe Arg
 125 130 135
 Asp Glu Glu Glu Asp Glu Glu His Ser Gly Asn Asp Ser Asp Gly
 140 145 150
 Ser Glu Pro Ser Glu Lys Arg Thr Arg Leu Glu Glu Glu Ile Val
 155 160 165
 Glu Gln Thr Met Arg Arg Arg Gln Arg Arg Glu Trp Glu Ala Arg
 170 175 180
 Arg Arg Asp Ile Leu Phe Asp Tyr Glu Gln Tyr Glu Tyr His Gly
 185 190 195
 Thr Ser Ser Ala Met Val Met Phe Glu Leu Ala Trp Met Leu Ser
 200 205 210
 Lys Asp Leu Asn Asp Met Leu Trp Trp Ala Ile Val Gly Leu Thr
 215 220 225
 Asp Gln Trp Val Gln Asp Lys Ile Thr Gln Met Lys Tyr Val Thr
 230 235 240
 Asp Val Gly Val Leu Gln Arg His Val Ser Arg His Asn His Arg

245					250					255				
Asn	Glu	Asp	Glu	Glu	Asn	Thr	Leu	Ser	Val	Asp	Cys	Thr	Arg	Ile
			260						265				270	
Ser	Phe	Glu	Tyr	Asp	Leu	Arg	Leu	Val	Leu	Tyr	Gln	His	Trp	Ser
			275						280				285	
Leu	His	Asp	Ser	Leu	Cys	Asn	Thr	Ser	Tyr	Thr	Ala	Ala	Arg	Phe
			290						295				300	
Lys	Leu	Trp	Ser	Val	His	Gly	Gln	Lys	Arg	Leu	Gln	Glu	Phe	Leu
			305						310				315	
Ala	Asp	Met	Gly	Leu	Pro	Leu	Lys	Gln	Val	Lys	Gln	Lys	Phe	Gln
			320						325				330	
Ala	Met	Asp	Ile	Ser	Leu	Lys	Glu	Asn	Leu	Arg	Glu	Met	Ile	Glu
			335						340				345	
Glu	Ser	Ala	Asn	Lys	Phe	Gly	Met	Lys	Asp	Met	Arg	Val	Gln	Thr
			350						355				360	
Phe	Ser	Ile	His	Phe	Gly	Phe	Lys	His	Lys	Phe	Leu	Ala	Ser	Asp
			365						370				375	
Val	Val	Phe	Ala	Thr	Met	Ser	Leu	Met	Glu	Ser	Pro	Glu	Lys	Asp
			380						385				390	
Gly	Ser	Gly	Thr	Asp	His	Phe	Ile	Gln	Ala	Leu	Asp	Ser	Leu	Ser
			395						400				405	
Arg	Ser	Asn	Leu	Asp	Lys	Leu	Tyr	His	Gly	Leu	Glu	Leu	Ala	Lys
			410						415				420	
Lys	Gln	Leu	Arg	Ala	Thr	Gln	Gln	Thr	Ile	Ala	Ser	Cys	Leu	Cys
			425						430				435	
Thr	Asn	Leu	Val	Ile	Ser	Gln	Gly	Pro	Phe	Leu	Tyr	Cys	Ser	Leu
			440						445				450	
Met	Glu	Gly	Thr	Pro	Asp	Val	Met	Leu	Phe	Ser	Arg	Pro	Ala	Ser
			455						460				465	
Leu	Ser	Leu	Leu	Ser	Lys	His	Leu	Leu	Lys	Ser	Phe	Val	Cys	Ser
			470						475				480	
Thr	Lys	Asn	Arg	Arg	Cys	Lys	Leu	Leu	Pro	Leu	Val	Met	Ala	Ala
			485						490				495	
Pro	Leu	Ser	Met	Glu	His	Gly	Thr	Val	Thr	Val	Val	Gly	Ile	Pro
			500						505				510	
Pro	Glu	Thr	Asp	Ser	Ser	Asp	Arg	Lys	Asn	Phe	Phe	Gly	Arg	Ala
			515						520				525	
Phe	Glu	Lys	Ala	Ala	Glu	Ser	Thr	Ser	Ser	Arg	Met	Leu	His	Asn
			530						535				540	
His	Phe	Asp	Leu	Ser	Val	Ile	Glu	Leu	Lys	Ala	Glu	Asp	Arg	Ser
			545						550				555	
Lys	Phe	Leu	Asp	Ala	Leu	Ile	Ser	Leu	Leu	Ser				

<210> 42
 <211> 380
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 44, 118, 172, 183
 <223> unknown base

<400> 42
 gtacctcagc gcgagcgcca ggcgtccggc cgccgtggct atgntcgtgt 50
 ccgatttccg caaagagttc tacgaggtagg tccagagcca gagggtcctt 100
 ctcttcgtgg cctcggangt ggatgctctg tgtgcgtgca agatccttca 150
 ggccttggtc cagtgtgacc angtgcaata tangctgggt ccagtttctg 200
 ggtggcaaga acttgaaact gcattttctg agcataaaga acagtttcat 250
 tattttattc tcataaactg tggagctaata gtagacctat tggatattct 300
 tcaacctgat gaagacacta tattctttgt gtgtgacacc cataggccag 350
 tcaatgttgt caatgtatac aacgataccc 380

<210> 43
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 43
 ttccgcaaag agttctacga ggtgg 25

<210> 44
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 44
 attgacaaca ttgactggcc tatggg 26

<210> 45
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 45
 gtggatgctc tgtgtgcgtg caagatcctt caggccttgt tccagtgtga 50

<210> 46

<211> 3089
<212> DNA
<213> Homo sapiens

<400> 46

caggaaccct ctctttgggt ctggattggg acccctttcc agtaccattt 50
tttctagtga accacgaagg gacgatacca gaaaacaccc tcaacccaaa 100
ggaaatagac tacagcccca attggctgac tttggctata gaaaaaagaa 150
aggaacgaaa agagacagtt ttttttggaa agctaagtct tccctttatc 200
gagtcaagaa accccccctt cttgagctat ttacagcttt taacaattga 250
gtaaagtacg ctccggtcac catggtgaca gccgccctgg gtcccgtctg 300
ggcagcgctc ctgctctttc tctgatgtg tgagatccgt atggtggagc 350
tcacctttga cagagctgtg gccagcggct gccaacgggt ctgtgactct 400
gaggaccccc tggatcctgc ccatgtatcc tcagcctctt cctccggccg 450
ccccacgcc ctgcctgaga tcagacccta cattaatatc accatcctga 500
agggtgacaa aggggaccca ggcccaatgg gcctgccagg gtacatgggc 550
agggaggggtc cccaagggga gcctggccct cagggcagca agggtgacaa 600
gggggagatg ggcagccccg gcgccccgtg ccagaagcgc ttcttcgcct 650
tctcagtggg ccgcaagacg gccctgcaca gcggcgagga cttccagacg 700
ctgctcttcg aaagggctct tgtgaacctt gatgggtgct ttgacatggc 750
gaccggccag tttgctgctc cctgcgtgg catctacttc ttcagcctca 800
atgtgcacag ctggaattac aaggagacgt acgtgcacat tatgcataac 850
cagaaagagg ctgtcatcct gtacgcgcag ccagcgcagc gcagcatcat 900
gcagagccag agtgtgatgc tggacctggc ctacggggac cgcgtctggg 950
tgcggtctct caagcgccag cgcgagaacg ccatctacag caacgacttc 1000
gacacctaca tcaccttcag cggccacctc atcaaggccg aggacgactg 1050
agggcctctg ggccaccctc ccggctggag agctcaggtg ctggtcccgt 1100
cccctgcagg gctcagtttg cactgctgtg aagcaggaag gccagggagg 1150
tccccgggga cctggcatte tggggagacc ctgcttctat cttggctgcc 1200
atcatccctc ccagcctatt tctgctcctc tcttctctct tggacctatt 1250
ttaagaagct tgctaacctc aatattctag aactttccca gcctcgtagc 1300
ccagcacttc tcaaacttgg aaatgcatgc gaatcaccgc gggttcgtgt 1350
taaatgcaga ttctgactca gcaggtctga gtgggtccag gattctgtgt 1400
ttctcatatg ttcttgggtg atgctgatgg ggtcagtcta tgaaccacac 1450

tggagcaacc aggtttotagg acttttctcaa tattctagta ctttctgaac 1500
 attctggaat cctccccaca ttctagaatt ctccaacat ttttttttct 1550
 tgagacagag ttttgctctg ttgccaggc tagagtgcag tggtgcaatc 1600
 tcagttcact gcaacctctg cctcccgggt tcaagcgatt cttctgcctc 1650
 agcctcccta gtggctggga ttacaggcgc ctgctaccat gcctggctaa 1700
 tttttgtatt tttagtagag atgggggtttc accatattgg ccaggctggg 1750
 cttgaactcc tgacttcagg tgaccacccc gcctcggcct ctcaaatgc 1800
 tgggattaca ggtgtgagcc accgtgcctg gccaatcca acattcttaa 1850
 attctctcat ccctccaggg ctcccctgc tatgttctct ttaccccttc 1900
 cccctcttct cttgctcagg cctgcaccac tgcagccacc gttcatttat 1950
 tcattcatta aacactgagc actcactctg tgctgggtcc cgggaagggt 2000
 gaggggggtca gacacaggcc ctgcccctgc cctcagtgc tggccagtcc 2050
 agcccaggcg gggagagatg tgtacatagg ttttaaagca gaccagagc 2100
 tcatgggggc ctgtgttctg ggtgttcagg tgctgctggg cctccattac 2150
 ccaactgctcc ccaaggctgg tgggacgggg tcccgggtggc aggggcagg 2200
 atctccttcc cgttcctcat ccacctgcc agtgctcctc gttacagcaa 2250
 accccagggg gccttgcca ggtcaagggt tctgtgagga gaggaccag 2300
 gagtgtgggg gcatttgggg ggtgaagtgg ccccgaaga atggaaccca 2350
 caccatagc tctccccaca gctgatacgg catcctgcga gaagacctgc 2400
 cctcctcact gggatcccct tctgctcctc tcccagggtc ctgccagggc 2450
 cttgctcagt cccttcacc aaagtcatct gaacttcctt tccccaggg 2500
 cctccagctg ccctcagaca ctgatgtctg tcccagggtg ctctctgccc 2550
 ctcatgcccc tctcaccggc ccagtgcctc gactctccag gctttatcaa 2600
 ggtgctaagg cccgggtggg cagctcctcg tctcagagcc ctctccggc 2650
 ctggtgctgc ctttaciaaac acctgcagga gaaggccac ggaagccca 2700
 ggcttttagag cctcagcag gtctggggag ctagagcaaa ggaggacct 2750
 caggccttcc gtttcttctt ccagggtggg gtggcctggg gttccctag 2800
 ccttccaaac ccagggtggc tgcccttctc ccagaggga ggcggcctcc 2850
 gccattggg gctcatgcag actctggggc tgaggtgccc cgggggggtga 2900
 tctctggtgc tcacagccga gggagccgtg gctccatggc cagatgacgg 2950
 aaacagggtc tgaccaagtg ccaggaagac ctgtgctata aaccacctg 3000
 cctgatcctg cccctgcctg acccggccac gccctgccgt ccagcatgat 3050

taaagaatgc tgtctcctct tggaaaaaaaa aaaaaaaaa 3089

<210> 47

<211> 259

<212> PRT

<213> Homo sapiens

<220>

<221> Signal Peptide

<222> 1-20

<223> Signal Peptide

<220>

<221> N-glycosylation Site

<222> 72-75

<223> N-glycosylation Site

<220>

<221> Clq Domain Proteins

<222> 144-178, 78-111, 84-117

<223> Clq Domain Proteins

<400> 47

Met	Val	Thr	Ala	Ala	Leu	Gly	Pro	Val	Trp	Ala	Ala	Leu	Leu	Leu	
1				5					10					15	
Phe	Leu	Leu	Met	Cys	Glu	Ile	Arg	Met	Val	Glu	Leu	Thr	Phe	Asp	
				20					25					30	
Arg	Ala	Val	Ala	Ser	Gly	Cys	Gln	Arg	Cys	Cys	Asp	Ser	Glu	Asp	
				35					40					45	
Pro	Leu	Asp	Pro	Ala	His	Val	Ser	Ser	Ala	Ser	Ser	Ser	Gly	Arg	
				50					55					60	
Pro	His	Ala	Leu	Pro	Glu	Ile	Arg	Pro	Tyr	Ile	Asn	Ile	Thr	Ile	
				65					70					75	
Leu	Lys	Gly	Asp	Lys	Gly	Asp	Pro	Gly	Pro	Met	Gly	Leu	Pro	Gly	
				80					85					90	
Tyr	Met	Gly	Arg	Glu	Gly	Pro	Gln	Gly	Glu	Pro	Gly	Pro	Gln	Gly	
				95					100					105	
Ser	Lys	Gly	Asp	Lys	Gly	Glu	Met	Gly	Ser	Pro	Gly	Ala	Pro	Cys	
				110					115					120	
Gln	Lys	Arg	Phe	Phe	Ala	Phe	Ser	Val	Gly	Arg	Lys	Thr	Ala	Leu	
				125					130					135	
His	Ser	Gly	Glu	Asp	Phe	Gln	Thr	Leu	Leu	Phe	Glu	Arg	Val	Phe	
				140					145					150	
Val	Asn	Leu	Asp	Gly	Cys	Phe	Asp	Met	Ala	Thr	Gly	Gln	Phe	Ala	
				155					160					165	
Ala	Pro	Leu	Arg	Gly	Ile	Tyr	Phe	Phe	Ser	Leu	Asn	Val	His	Ser	
				170					175					180	
Trp	Asn	Tyr	Lys	Glu	Thr	Tyr	Val	His	Ile	Met	His	Asn	Gln	Lys	
				185					190					195	
Glu	Ala	Val	Ile	Leu	Tyr	Ala	Gln	Pro	Ser	Glu	Arg	Ser	Ile	Met	

	200		205		210
Gln Ser Gln Ser	Val Met Leu Asp Leu	Ala Tyr Gly Asp Arg	Val		
	215	220	225		
Trp Val Arg Leu	Phe Lys Arg Gln Arg	Glu Asn Ala Ile Tyr	Ser		
	230	235	240		
Asn Asp Phe Asp	Thr Tyr Ile Thr Phe	Ser Gly His Leu Ile	Lys		
	245	250	255		
Ala Glu Asp Asp					

<210> 48
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 48
 ccagacgctg ctcttcgaaa gggtc 25

<210> 49
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 49
 ggtccccgta ggccaggtcc agc 23

<210> 50
 <211> 50
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 50
 ctactttcttc agcctcaatg tgcacagctg gaattacaag gagacgtacg 50

<210> 51
 <211> 2768
 <212> DNA
 <213> Homo sapiens

<400> 51
 actcgaacgc agttgcttcg ggacccagga cccctcggg cccgaccgc 50
 caggaaagac tgaggccgcg gctgccccg cccggtccc tgcgccgcg 100
 ccgcctcccg ggacagaaga tgtgctccag ggtccctctg ctgctgccgc 150
 tgctcctgct actggccctg gggcctggg tgcagggctg cccatccggc 200
 tgccagtgcg gccagccaca gacagtcttc tgcaactgcc gccaggggac 250

cacggtgccc cgagacgtgc caccgcacac ggtggggctg tacgtctttg 300
agaacggcat caccatgctc gacgcaggca gctttgccgg cctgccgggc 350
ctgcagctcc tggacctgtc acagaaccag atcgccagcc tgcccagcgg 400
ggtcttccag ccactogcca acctcagcaa cctggacctg acggccaaca 450
ggctgcatga aatcaccaat gagaccttcc gtggcctgcg gcgcctcgag 500
cgctctacc tgggcaagaa ccgcatccgc cacatccagc ctggtgcctt 550
cgacacgctc gaccgcctcc tggagctcaa gctgcaggac aacgagctgc 600
gggcactgcc cccgctgcgc ctgccccgcc tgctgctgct ggacctcagc 650
cacaacagcc tcctggccct ggagcccggc atcctggaca ctgccaacgt 700
ggagggcgctg cggctggctg gtctggggct gcagcagctg gacgaggggc 750
tcttcagccg cttgcgcaac ctccacgacc tggatgtgtc cgacaaccag 800
ctggagcgag tgccacctgt gatccgaggc ctccggggcc tgacgcgcct 850
gcggctggcc ggcaacaccc gcattgccca gctgcggccc gaggacctgg 900
ccggcctggc tgccctgcag gagctggatg tgagcaacct aagcctgcag 950
gccctgcctg ggcacctctc gggcctcttc ccccgccctgc ggctgctggc 1000
agctgcccgc aaccccttca actgcgtgtg cccctgagc tggtttgccc 1050
cctgggtgcg cgagagccac gtcacactgg ccagccctga ggagacgcgc 1100
tgccacttcc cgccaagaa cgctggccgg ctgctcctgg agcttgacta 1150
cgccgacttt ggctgcccag ccaccaccac cacagccaca gtgcccacca 1200
cgaggcccggt ggtgcgggag cccacagcct tgtcttctag cttggctcct 1250
acctggctta gcccacagc gccggccact gaggcccca gcccgccctc 1300
cactgcccga ccgactgtag ggctgtccc ccagcccag gactgcccac 1350
cgtccacctg cctcaatggg ggcacatgcc acctggggac acggcaccac 1400
ctggcgtgct tgtgccccga aggttccag ggctgtact gtgagagcca 1450
gatggggcag gggacacggc ccagccctac accagtcacg ccgaggccac 1500
cacggtccct gaccctgggc atcgagccgg tgagcccac ctccctgcgc 1550
gtggggctgc agcgtacct ccaggggagc tccgtgcagc tcaggagcct 1600
ccgtctcacc tatcgcaacc tatcgggccc tgataagcgg ctggtgacgc 1650
tgcgactgcc tgctcgtc gctgagtaca cggtcacca gctgcggccc 1700
aacgccactt actccgtctg tgtcatgcct ttggggcccg ggcggtgcc 1750
ggagggcgag gaggcctgcg gggaggccca tacaccccca gccgtccact 1800
ccaaccacgc cccagtcacc caggcccgcg agggcaacct gccgtcctc 1850

attgcgcccc ccctggccgc ggtgctcctg gccgcgctgg ctgcggtggg 1900
 ggcagcctac tgtgtgcggc gggggcgggc catggcagca gcggctcagg 1950
 acaaagggca ggtggggcca ggggctgggc ccctggaact ggagggagtg 2000
 aaggtcccct tggagccagg cccgaaggca acagagggcg gtggagagggc 2050
 cctgcccagc gggctctgagt gtgaggtgcc actcatgggc ttcccagggc 2100
 ctggcctcca gtcacccctc cacgcaaagc cctacatcta agccagagag 2150
 agacagggca gctggggccg ggctctcagc cagtgagatg gccagcccc 2200
 tcctgctgcc acaccacgta agttctcagt cccaacctcg gggatgtgtg 2250
 cagacagggc tgtgtgacca cagctggggc ctgttccctc tggacctcgg 2300
 tctcctcatc tgtgagatgc tgtggcccag ctgacgagcc ctaacgtccc 2350
 cagaaccgag tgcctatgag gacagtgtcc gccctgccct ccgcaacgtg 2400
 cagtccctgg gcacggcggg ccctgccatg tgctggtaac gcatgcctgg 2450
 gtcctgctgg gctctccac tccaggcggg ccctgggggc cagtgaagga 2500
 agtccccgga aagagcagag ggagagcggg taggcggctg tgtgactcta 2550
 gtcttgcccc caggaagcga aggaacaaaa gaaactggaa aggaagatgc 2600
 ttttaggaaca tgttttgctt ttttaaaata tatatattha taagagatcc 2650
 tttccattt attctgggaa gatgtttttc aaactcagag acaaggactt 2700
 tggtttttgt aagacaaacg atgatatgaa ggccttttgt aagaaaaaat 2750
 aaaagatgaa gtgtgaaa 2768

<210> 52
 <211> 673
 <212> PRT
 <213> Homo sapiens

<400> 52
 Met Cys Ser Arg Val Pro Leu Leu Leu Pro Leu Leu Leu Leu Leu
 1 5 10 15
 Ala Leu Gly Pro Gly Val Gln Gly Cys Pro Ser Gly Cys Gln Cys
 20 25 30
 Ser Gln Pro Gln Thr Val Phe Cys Thr Ala Arg Gln Gly Thr Thr
 35 40 45
 Val Pro Arg Asp Val Pro Pro Asp Thr Val Gly Leu Tyr Val Phe
 50 55 60
 Glu Asn Gly Ile Thr Met Leu Asp Ala Gly Ser Phe Ala Gly Leu
 65 70 75
 Pro Gly Leu Gln Leu Leu Asp Leu Ser Gln Asn Gln Ile Ala Ser
 80 85 90
 Leu Pro Ser Gly Val Phe Gln Pro Leu Ala Asn Leu Ser Asn Leu

	95	100	105
Asp Leu Thr Ala	Asn Arg Leu His Glu 110	Ile Thr Asn Glu Thr 115	Phe 120
Arg Gly Leu Arg	Arg Leu Glu Arg Leu 125	Tyr Leu Gly Lys Asn 130	Arg 135
Ile Arg His Ile	Gln Pro Gly Ala Phe 140	Asp Thr Leu Asp Arg 145	Leu 150
Leu Glu Leu Lys	Leu Gln Asp Asn Glu 155	Leu Arg Ala Leu Pro 160	Pro 165
Leu Arg Leu Pro	Arg Leu Leu Leu Leu 170	Asp Leu Ser His Asn 175	Ser 180
Leu Leu Ala Leu	Glu Pro Gly Ile Leu 185	Asp Thr Ala Asn Val 190	Glu 195
Ala Leu Arg Leu	Ala Gly Leu Gly Leu 200	Gln Gln Leu Asp Glu 205	Gly 210
Leu Phe Ser Arg	Leu Arg Asn Leu His 215	Asp Leu Asp Val Ser 220	Asp 225
Asn Gln Leu Glu	Arg Val Pro Pro Val 230	Ile Arg Gly Leu Arg 235	Gly 240
Leu Thr Arg Leu	Arg Leu Ala Gly Asn 245	Thr Arg Ile Ala Gln 250	Leu 255
Arg Pro Glu Asp	Leu Ala Gly Leu Ala 260	Ala Leu Gln Glu Leu 265	Asp 270
Val Ser Asn Leu	Ser Leu Gln Ala Leu 275	Pro Gly Asp Leu Ser 280	Gly 285
Leu Phe Pro Arg	Leu Arg Leu Leu Ala 290	Ala Ala Arg Asn Pro 295	Phe 300
Asn Cys Val Cys	Pro Leu Ser Trp Phe 305	Gly Pro Trp Val Arg 310	Glu 315
Ser His Val Thr	Leu Ala Ser Pro Glu 320	Glu Thr Arg Cys His 325	Phe 330
Pro Pro Lys Asn	Ala Gly Arg Leu Leu 335	Leu Glu Leu Asp Tyr 340	Ala 345
Asp Phe Gly Cys	Pro Ala Thr Thr Thr 350	Thr Ala Thr Val Pro 355	Thr 360
Thr Arg Pro Val	Val Arg Glu Pro Thr 365	Ala Leu Ser Ser Ser 370	Leu 375
Ala Pro Thr Trp	Leu Ser Pro Thr Ala 380	Pro Ala Thr Glu Ala 385	Pro 390
Ser Pro Pro Ser	Thr Ala Pro Pro Thr 395	Val Gly Pro Val Pro 400	Gln 405
Pro Gln Asp Cys	Pro Pro Ser Thr Cys	Leu Asn Gly Gly Thr	Cys

	410	415	420
His Leu Gly Thr	Arg His His Leu Ala	Cys Leu Cys Pro Glu	Gly
	425	430	435
Phe Thr Gly Leu	Tyr Cys Glu Ser Gln	Met Gly Gln Gly Thr	Arg
	440	445	450
Pro Ser Pro Thr	Pro Val Thr Pro Arg	Pro Pro Arg Ser Leu	Thr
	455	460	465
Leu Gly Ile Glu	Pro Val Ser Pro Thr	Ser Leu Arg Val Gly	Leu
	470	475	480
Gln Arg Tyr Leu	Gln Gly Ser Ser Val	Gln Leu Arg Ser Leu	Arg
	485	490	495
Leu Thr Tyr Arg	Asn Leu Ser Gly Pro	Asp Lys Arg Leu Val	Thr
	500	505	510
Leu Arg Leu Pro	Ala Ser Leu Ala Glu	Tyr Thr Val Thr Gln	Leu
	515	520	525
Arg Pro Asn Ala	Thr Tyr Ser Val Cys	Val Met Pro Leu Gly	Pro
	530	535	540
Gly Arg Val Pro	Glu Gly Glu Glu Ala	Cys Gly Glu Ala His	Thr
	545	550	555
Pro Pro Ala Val	His Ser Asn His Ala	Pro Val Thr Gln Ala	Arg
	560	565	570
Glu Gly Asn Leu	Pro Leu Leu Ile Ala	Pro Ala Leu Ala Ala	Val
	575	580	585
Leu Leu Ala Ala	Leu Ala Ala Val Gly	Ala Ala Tyr Cys Val	Arg
	590	595	600
Arg Gly Arg Ala	Met Ala Ala Ala Ala	Gln Asp Lys Gly Gln	Val
	605	610	615
Gly Pro Gly Ala	Gly Pro Leu Glu Leu	Glu Gly Val Lys Val	Pro
	620	625	630
Leu Glu Pro Gly	Pro Lys Ala Thr Glu	Gly Gly Gly Glu Ala	Leu
	635	640	645
Pro Ser Gly Ser	Glu Cys Glu Val Pro	Leu Met Gly Phe Pro	Gly
	650	655	660
Pro Gly Leu Gln	Ser Pro Leu His Ala	Lys Pro Tyr Ile	
	665	670	

<210> 53

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 53

tcttcagccg cttgcgcaac ctc 23

<210> 54
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 54
ttgctcacat ccagctcctg cagg 24

<210> 55
<211> 41
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 55
tggatgttgt ccagacaacc agctggagct gtatccgagg c 41

<210> 56
<211> 3462
<212> DNA
<213> Homo sapiens

<400> 56
gaatcatcca cgcacctgca gctctgctga gagagtgcaa gccgtggggg 50
ttttgagctc atcttcatca ttcatatgag gaaataagtg gtaaaatcct 100
tggaaataca atgagactca tcagaaacat ttacatatatt tgtagtattg 150
ttatgacagc agaggggtgat gctccagagc tgccagaaga aagggaactg 200
atgaccaact gctccaacat gtctctaaga aagggtcccg cagacttgac 250
cccagccaca acgacactgg atttatccta taacctcctt tttcaactcc 300
agagttcaga ttttcattct gtctccaaac tgagagtttt gattctatgc 350
cataacagaa ttcaacagct ggatctcaaa acctttgaat tcaacaagga 400
gttaagatat ttagatttgt ctaataacag actgaagagt gtaacttggg 450
atttactggc aggtctcagg tatttagatc tttcttttaa tgactttgac 500
accatgccta tctgtgagga agctggcaac atgtcacacc tggaaatcct 550
aggtttgagt ggggcaaaaa tacaaaaatc agatttccag aaaattgctc 600
atctgcatct aaatactgtc ttcttaggat tcagaactct tcctcattat 650
gaagaaggta gcctgcccac cttaaacaca acaaaaactgc acattgtttt 700
accaatggac acaaatttct gggttctttt gcgtgatgga atcaagactt 750
caaaaatatt agaaatgaca aatatagatg gcaaaagcca atttgtaagt 800
tatgaaatgc aacgaaatct tagtttagaa aatgctaaga catcggttct 850
attgcttaat aaagttgatt tactctggga cgaccttttc cttatcttac 900

aatttgtttg gcatacatca gtggaacact ttcagatccg aaatgtgact 950
tttggtggta aggcttatct tgaccacaat tcatttgact actcaaatac 1000
tgtaatgaga actataaaat tggagcatgt acatttcaga gtgttttaca 1050
ttcaacagga taaaatctat ttgcttttga ccaaaatgga catagaaaac 1100
ctgacaatat caaatgcaca aatgccacac atgcttttcc cgaattatcc 1150
tacgaaatto caatatttaa attttgccaa taatatctta acagacgagt 1200
tgttttaaag aactatccaa ctgcctcact tgaaaactct cattttgaat 1250
ggcaataaac tggagacact ttcttttagta agttgctttg ctaacaacac 1300
acccttggaa cacttggatc tgagtcaaaa tctattacaa cataaaaaatg 1350
atgaaaattg ctcatggcca gaaactgtgg tcaatatgaa tctgtcatac 1400
aataaattgt ctgattctgt cttcaggtgc ttgccccaaa gtattcaaat 1450
acttgacctt aataataacc aaatccaaac tgtacctaaa gagactattc 1500
atctgatggc cttacgagaa ctaaattattg catttaattt tctaactgat 1550
ctccctggat gcagtcattt cagtagactt tcagttctga acattgaaat 1600
gaacttcatt ctgagcccat ctctggattt tgttcagagc tgccaggaag 1650
ttaaaactct aaatgcggga agaaatccat tccggtgtac ctgtgaatta 1700
aaaaatttca ttcagcttga aacatattca gaggtcatga tggttggatg 1750
gtcagattca tacacctgtg aatacccttt aaacctaagg ggaactaggt 1800
taaaagacgt tcatctccac gaattatctt gcaacacagc tctgttgatt 1850
gtcaccattg tggttattat gctagttctg gggttggctg tggccttctg 1900
ctgtctccac tttgatctgc cctggtatct caggatgcta ggtcaatgca 1950
cacaacatg gcacagggtt aggaaaacaa cccaagaaca actcaagaga 2000
aatgtccgat tccacgcatt tatttcatac agtgaacatg attctctgtg 2050
ggatgaagaat gaattgatcc ccaatctaga gaaggaagat ggttctatct 2100
tgatttgcct ttatgaaagc tactttgacc ctggcaaaag cattagttaa 2150
aatattgtaa gcttcattga gaaaagctat aagtcctctt ttgttttgc 2200
tcccaacttt gtccagaatg agtggtgcca ttatgaattc tactttgccc 2250
accacaatct cttccatgaa aattctgatc atataattct tatcttactg 2300
gaaccattc cattctattg cattcccacc aggtatcata aactgaaagc 2350
tctcctggaa aaaaaagcat acttggaatg gcccaaggat aggcgtaaat 2400
gtgggctttt ctgggcaaac cttcgagctg ctattaatgt taatgtatta 2450
gccaccagag aaatgtatga actgcagaca ttcacagagt taaatgaaga 2500

gtctcgaggt tctacaatct ctctgatgag aacagattgt ctataaaatc 2550
 ccacagtcct tgggaagttg gggaccacat acactgttgg gatgtacatt 2600
 gatacaacct ttatgatggc aatttgacaa tatttattaa aataaaaaat 2650
 ggttattccc ttcatatcag tttctagaag gatttctaag aatgtatcct 2700
 atagaaacac cttcacaagt ttataagggc ttatggaaaa aggtgttcat 2750
 cccaggattg tttataatca tgaaaaatgt ggccagggtgc agtgggtcac 2800
 tcttgtaatc ccagcactat gggaggccaa ggtgggtgac ccacgaggtc 2850
 aagagatgga gaccatcctg gccaacatgg tgaaaccctg tctctactaa 2900
 aaatacaaaa attagctggg cgtgatgggtg cacgcctgta gtcccagcta 2950
 cttgggaggc tgaggcagga gaatcgcttg aaccgaggag gtggcagttg 3000
 cagtgaagctg agatcgagcc actgcactcc agcctggtga cagagcgaga 3050
 ctccatctca aaaaaaagaa aaaaaaaaaa gaaaaaatg gaaaacatcc 3100
 tcatggccac aaaataaggt ctaattcaat aaattatagt acattaatgt 3150
 aatataatat tacatgccac taaaaagaat aaggtagctg tatatttcct 3200
 ggtatggaaa aaacatatta atatgttata aactattagg ttggtgcaaa 3250
 actaattgtg gtttttgcca ttgaaatggc attgaaataa aagtgtaaag 3300
 aaatctatac cagatgtagt aacagtgggt tgggtctggg aggttggtatt 3350
 acaggagca tttgatttct atgttggtgta tttctataat gtttgaattg 3400
 tttagaatga atctgtatct cttttataag tagaaaaaaa ataaagatag 3450
 tttttacagc ct 3462

<210> 57
 <211> 811
 <212> PRT
 <213> Homo sapiens

<400> 57
 Met Arg Leu Ile Arg Asn Ile Tyr Ile Phe Cys Ser Ile Val Met
 1 5 10 15
 Thr Ala Glu Gly Asp Ala Pro Glu Leu Pro Glu Glu Arg Glu Leu
 20 25 30
 Met Thr Asn Cys Ser Asn Met Ser Leu Arg Lys Val Pro Ala Asp
 35 40 45
 Leu Thr Pro Ala Thr Thr Thr Leu Asp Leu Ser Tyr Asn Leu Leu
 50 55 60
 Phe Gln Leu Gln Ser Ser Asp Phe His Ser Val Ser Lys Leu Arg
 65 70 75
 Val Leu Ile Leu Cys His Asn Arg Ile Gln Gln Leu Asp Leu Lys
 80 85 90

Thr	Phe	Glu	Phe	Asn	Lys	Glu	Leu	Arg	Tyr	Leu	Asp	Leu	Ser	Asn	95	100	105
Asn	Arg	Leu	Lys	Ser	Val	Thr	Trp	Tyr	Leu	Leu	Ala	Gly	Leu	Arg	110	115	120
Tyr	Leu	Asp	Leu	Ser	Phe	Asn	Asp	Phe	Asp	Thr	Met	Pro	Ile	Cys	125	130	135
Glu	Glu	Ala	Gly	Asn	Met	Ser	His	Leu	Glu	Ile	Leu	Gly	Leu	Ser	140	145	150
Gly	Ala	Lys	Ile	Gln	Lys	Ser	Asp	Phe	Gln	Lys	Ile	Ala	His	Leu	155	160	165
His	Leu	Asn	Thr	Val	Phe	Leu	Gly	Phe	Arg	Thr	Leu	Pro	His	Tyr	170	175	180
Glu	Glu	Gly	Ser	Leu	Pro	Ile	Leu	Asn	Thr	Thr	Lys	Leu	His	Ile	185	190	195
Val	Leu	Pro	Met	Asp	Thr	Asn	Phe	Trp	Val	Leu	Leu	Arg	Asp	Gly	200	205	210
Ile	Lys	Thr	Ser	Lys	Ile	Leu	Glu	Met	Thr	Asn	Ile	Asp	Gly	Lys	215	220	225
Ser	Gln	Phe	Val	Ser	Tyr	Glu	Met	Gln	Arg	Asn	Leu	Ser	Leu	Glu	230	235	240
Asn	Ala	Lys	Thr	Ser	Val	Leu	Leu	Leu	Asn	Lys	Val	Asp	Leu	Leu	245	250	255
Trp	Asp	Asp	Leu	Phe	Leu	Ile	Leu	Gln	Phe	Val	Trp	His	Thr	Ser	260	265	270
Val	Glu	His	Phe	Gln	Ile	Arg	Asn	Val	Thr	Phe	Gly	Gly	Lys	Ala	275	280	285
Tyr	Leu	Asp	His	Asn	Ser	Phe	Asp	Tyr	Ser	Asn	Thr	Val	Met	Arg	290	295	300
Thr	Ile	Lys	Leu	Glu	His	Val	His	Phe	Arg	Val	Phe	Tyr	Ile	Gln	305	310	315
Gln	Asp	Lys	Ile	Tyr	Leu	Leu	Leu	Thr	Lys	Met	Asp	Ile	Glu	Asn	320	325	330
Leu	Thr	Ile	Ser	Asn	Ala	Gln	Met	Pro	His	Met	Leu	Phe	Pro	Asn	335	340	345
Tyr	Pro	Thr	Lys	Phe	Gln	Tyr	Leu	Asn	Phe	Ala	Asn	Asn	Ile	Leu	350	355	360
Thr	Asp	Glu	Leu	Phe	Lys	Arg	Thr	Ile	Gln	Leu	Pro	His	Leu	Lys	365	370	375
Thr	Leu	Ile	Leu	Asn	Gly	Asn	Lys	Leu	Glu	Thr	Leu	Ser	Leu	Val	380	385	390
Ser	Cys	Phe	Ala	Asn	Asn	Thr	Pro	Leu	Glu	His	Leu	Asp	Leu	Ser	395	400	405

Gln	Asn	Leu	Leu	Gln	His	Lys	Asn	Asp	Glu	Asn	Cys	Ser	Trp	Pro	
				410					415					420	
Glu	Thr	Val	Val	Asn	Met	Asn	Leu	Ser	Tyr	Asn	Lys	Leu	Ser	Asp	
				425					430					435	
Ser	Val	Phe	Arg	Cys	Leu	Pro	Lys	Ser	Ile	Gln	Ile	Leu	Asp	Leu	
				440					445					450	
Asn	Asn	Asn	Gln	Ile	Gln	Thr	Val	Pro	Lys	Glu	Thr	Ile	His	Leu	
				455					460					465	
Met	Ala	Leu	Arg	Glu	Leu	Asn	Ile	Ala	Phe	Asn	Phe	Leu	Thr	Asp	
				470					475					480	
Leu	Pro	Gly	Cys	Ser	His	Phe	Ser	Arg	Leu	Ser	Val	Leu	Asn	Ile	
				485					490					495	
Glu	Met	Asn	Phe	Ile	Leu	Ser	Pro	Ser	Leu	Asp	Phe	Val	Gln	Ser	
				500					505					510	
Cys	Gln	Glu	Val	Lys	Thr	Leu	Asn	Ala	Gly	Arg	Asn	Pro	Phe	Arg	
				515					520					525	
Cys	Thr	Cys	Glu	Leu	Lys	Asn	Phe	Ile	Gln	Leu	Glu	Thr	Tyr	Ser	
				530					535					540	
Glu	Val	Met	Met	Val	Gly	Trp	Ser	Asp	Ser	Tyr	Thr	Cys	Glu	Tyr	
				545					550					555	
Pro	Leu	Asn	Leu	Arg	Gly	Thr	Arg	Leu	Lys	Asp	Val	His	Leu	His	
				560					565					570	
Glu	Leu	Ser	Cys	Asn	Thr	Ala	Leu	Leu	Ile	Val	Thr	Ile	Val	Val	
				575					580					585	
Ile	Met	Leu	Val	Leu	Gly	Leu	Ala	Val	Ala	Phe	Cys	Cys	Leu	His	
				590					595					600	
Phe	Asp	Leu	Pro	Trp	Tyr	Leu	Arg	Met	Leu	Gly	Gln	Cys	Thr	Gln	
				605					610					615	
Thr	Trp	His	Arg	Val	Arg	Lys	Thr	Thr	Gln	Glu	Gln	Leu	Lys	Arg	
				620					625					630	
Asn	Val	Arg	Phe	His	Ala	Phe	Ile	Ser	Tyr	Ser	Glu	His	Asp	Ser	
				635					640					645	
Leu	Trp	Val	Lys	Asn	Glu	Leu	Ile	Pro	Asn	Leu	Glu	Lys	Glu	Asp	
				650					655					660	
Gly	Ser	Ile	Leu	Ile	Cys	Leu	Tyr	Glu	Ser	Tyr	Phe	Asp	Pro	Gly	
				665					670					675	
Lys	Ser	Ile	Ser	Glu	Asn	Ile	Val	Ser	Phe	Ile	Glu	Lys	Ser	Tyr	
				680					685					690	
Lys	Ser	Ile	Phe	Val	Leu	Ser	Pro	Asn	Phe	Val	Gln	Asn	Glu	Trp	
				695					700					705	
Cys	His	Tyr	Glu	Phe	Tyr	Phe	Ala	His	His	Asn	Leu	Phe	His	Glu	
				710					715					720	

Asn	Ser	Asp	His	Ile	Ile	Leu	Ile	Leu	Leu	Glu	Pro	Ile	Pro	Phe
				725					730					735
Tyr	Cys	Ile	Pro	Thr	Arg	Tyr	His	Lys	Leu	Lys	Ala	Leu	Leu	Glu
				740					745					750
Lys	Lys	Ala	Tyr	Leu	Glu	Trp	Pro	Lys	Asp	Arg	Arg	Lys	Cys	Gly
				755					760					765
Leu	Phe	Trp	Ala	Asn	Leu	Arg	Ala	Ala	Ile	Asn	Val	Asn	Val	Leu
				770					775					780
Ala	Thr	Arg	Glu	Met	Tyr	Glu	Leu	Gln	Thr	Phe	Thr	Glu	Leu	Asn
				785					790					795
Glu	Glu	Ser	Arg	Gly	Ser	Thr	Ile	Ser	Leu	Met	Arg	Thr	Asp	Cys
				800					805					810

Leu

<210> 58
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 58
 tcccaccagg tatcataaac tgaa 24

<210> 59
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 59
 ttatagacaa tctgttctca tcagaga 27

<210> 60
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 60
 aaaaagcata cttggaatgg cccaaggata ggtgtaaatg 40

<210> 61
 <211> 3772
 <212> DNA
 <213> Homo sapiens

<400> 61
 gggggctttc ttgggcttgg ctgcttgga cacctgcctc caaggaccgg 50
 cctcgagggg gtcgccggga aaggaggga agaaggaagg gcggggccgg 100

ccccctgcg cccgccccgc gcctctgcgc gcccctgtcc gcccggccc 150
agcccagccc agccccgcgg gccggtcaca cgcgcagcca gccggccgcc 200
tcccgcgccc aagcgcgcgc ctctgctgtg ccctgcgccc ttgccccgcg 250
ccagcttctg cgcgcgcgc ccgcccggcg ccccgggtga ccgtgaccct 300
gccctgggcg cggggcgag caggcatgtc ccgcccgggg accgctaccc 350
cagcgctggc cctggtgctc ctggcagtga ccctggccgg ggtcggagcc 400
cagggcgag ccctcgagga ccctgattat tacgggcagg agatctggag 450
ccgggagccc tactacgcgc gcccgagacc cgagctcgag accttctctc 500
cgccgctgcc tgcggggccc ggggaggagt gggagcggcg cccgcaggag 550
cccaggccgc ccaagagggc caccaagccc aagaaagctc ccaagaggga 600
gaagtcggct ccggagccgc ctccaccagg taaacacagc aacaaaaaag 650
ttatgagaac caagagctct gagaaggctg ccaacgatga tcacagtgtc 700
cgtgtggccc gtgaagatgt cagagagagt tgccacctc ttggtctgga 750
aaccttaaaa atcacagact tccagctcca tgccctcacg gtgaagcgtc 800
atggcctggg ggcacatcga gggagactca acatccaggc gggcattaat 850
gaaaatgatt tttatgacgg agcgtggtgc gcgggaagaa atgacctcca 900
gcagtggatt gaagtggatg ctcggcgcct gaccagattc actggtgtca 950
tactcaagg gaggaactcc ctctggctga gtgactgggt gacatcctat 1000
aaggtcatgg tgagcaatga cagccacacg tgggtcactg ttaagaatgg 1050
atctggagac atgatatttg agggaaacag tgagaaggag atccctgttc 1100
tcaatgagct acccgteccc atggtggccc gctacatccg cataaaccct 1150
cagtcctggt ttgataatgg gagcatctgc atgagaatgg agatcctggg 1200
ctgcccactg ccagatccta ataattatta tcaccgcccg aacgagatga 1250
ccaccactga tgacctggat ttaagcacc acaattataa ggaaatgcgc 1300
cagttgatga aagttgtgaa tgaaatgtgt cccaatatca ccagaattta 1350
caacattgga aaaagccacc agggcctgaa gctgtatgct gtggagatct 1400
cagatcaccc tggggagcat gaagtcggtg agcccagatt ccactacatc 1450
gcgggggccc acggcaatga ggtgctgggc cgggagctgc tgetgctgct 1500
ggtgcagttc gtgtgtcagg agtacttggc ccggaatgcg cgcacgtcc 1550
acctggtgga ggagacgcgg attcacgtcc tccctccct caaccccgat 1600
ggctacgaga aggcctacga agggggctcg gagctgggag gctggtccct 1650
gggacgctgg acccacgatg gaattgacat caacaacaac tttcctgatt 1700

taaacacgct gctctgggag gcagaggatc gacagaatgt ccccaggaaa 1750
 gttcccaatc actatatatgc aatccctgag tggtttctgt cggaaaatgc 1800
 cacggtggct gccgagacca gagcagtcac agcctggatg gaaaaaatcc 1850
 cttttgtgct gggcggaac ctgcagggcg gcgagctggt ggtggcgat 1900
 ccctacgacc tgggtcggtc cccctggaag acgcaggaac acacccccac 1950
 ccccgatgac cacgtgttcc gctggctggc ctactcctat gcctccacac 2000
 accgcctcat gacagacgcc cggaggaggg tgtgccacac ggaggacttc 2050
 cagaaggagg agggcactgt caatggggcc tcctggcaca ccgtcgctgg 2100
 aagtctgaac gatttcagct accttcatac aaactgcttc gaactgtcca 2150
 totacgtggg ctgtgataaa taccacatg agagccagct gcccgaggag 2200
 tgggagaata accgggaatc tctgatcgtg ttcattggagc aggttcacgc 2250
 tggcattaaa ggcttgggga gagattcaca tggaaaagga atcccaaacg 2300
 ccattatctc cgtagaaggc attaacatg acatccgaac agccaacgat 2350
 ggggattact ggcgctcct gaacctgga gagtatgtgg tcacagcaaa 2400
 ggccgaaggc ttcactgcat ccaccaagaa ctgtatggtt ggctatgaca 2450
 tggggggcac aagggtgtgac ttcacactta gcaaaacaa catggccagg 2500
 atccgagaga tcatggagaa gtttgggaag cagcccgta gcctgccagc 2550
 caggcggctg aagctgcggg ggcggaagag acgacagcgt gggtgaccct 2600
 cctggggcct tgagactcgt ctgggacca tgcaaattaa accaacctgg 2650
 tagtagctcc atagtggact cactcactgt tgtttcctct gtaattcaag 2700
 aagtgcctgg aagagagggt gcattgtgag gcagggtcca aaagggaagg 2750
 ctggaggctg aggctgtttt cttttctttg ttccattta tccaaataac 2800
 ttggacagag cagcagagaa aagctgatgg gagtgagaga actcagcaag 2850
 ccaacctggg aatcagagag agaaggagaa ggaggggagc ctgtccgttc 2900
 agagcctctg gctgcataga aaaggattct ggtgcttccc ctgtttgcgt 2950
 ggcagcaagg gttccacgtg catttgcaat ttgcacagct aaaattgcag 3000
 catttcccca gctgggctgt cccaaatgtt accatttgag atgctcccag 3050
 gcgtcctaag agaatccacc ctctctggcc ctgggacatt gcaagctgct 3100
 acaataaat tctgtgttct ttgacaata gcgtcattgc caagtgcaca 3150
 tcagtgaacc tcttgaatct gtttagtctc cttttcaac aaaggagtgt 3200
 gttcagaaaa ggagagagag gctgagatca ttcaggagt tgggtggcag 3250
 caagcatgga gcttcttgca caaattctgg gtccataaac aacccccaaa 3300

gtccctgctg atccagtagc cctggaggtt ccccaggtag ggagagccag 3350
 aggtgccagc cttcctgaag ggccagaaaa tttagcctgg atctcctctt 3400
 ttacctgcta ggactggaaa gagccagaag tggggtggcc tgaagccctc 3450
 tctctgcttg aggtattgcc cctgtgtgga attgagtgtc catgggttgg 3500
 cctcatatca gcctgggagt tatttttgat atgtagaatg ccagatcttc 3550
 cagattaggc taaatgtaat gaaaacctct taggattatc tgtggagcat 3600
 cagtttggga agaattattg aattatcttg caagaaaaaa gtatgtctca 3650
 ctttttgta atgttgctgc ctcatgacc tgggaaaaat gaaaaaaaaa 3700
 aataaagcaa atggtaagac ccttaaaaaa aaaaaaaaaa aaaaaaaaaa 3750
 aaaaaaaaaa aaaaaaaaaa aa 3772

<210> 62

<211> 756

<212> PRT

<213> Homo sapiens

<400> 62

Met	Ser	Arg	Pro	Gly	Thr	Ala	Thr	Pro	Ala	Leu	Ala	Leu	Val	Leu	1	5	10	15
Leu	Ala	Val	Thr	Leu	Ala	Gly	Val	Gly	Ala	Gln	Gly	Ala	Ala	Leu	20	25	30	
Glu	Asp	Pro	Asp	Tyr	Tyr	Gly	Gln	Glu	Ile	Trp	Ser	Arg	Glu	Pro	35	40	45	
Tyr	Tyr	Ala	Arg	Pro	Glu	Pro	Glu	Leu	Glu	Thr	Phe	Ser	Pro	Pro	50	55	60	
Leu	Pro	Ala	Gly	Pro	Gly	Glu	Glu	Trp	Glu	Arg	Arg	Pro	Gln	Glu	65	70	75	
Pro	Arg	Pro	Pro	Lys	Arg	Ala	Thr	Lys	Pro	Lys	Lys	Ala	Pro	Lys	80	85	90	
Arg	Glu	Lys	Ser	Ala	Pro	Glu	Pro	Pro	Pro	Pro	Gly	Lys	His	Ser	95	100	105	
Asn	Lys	Lys	Val	Met	Arg	Thr	Lys	Ser	Ser	Glu	Lys	Ala	Ala	Asn	110	115	120	
Asp	Asp	His	Ser	Val	Arg	Val	Ala	Arg	Glu	Asp	Val	Arg	Glu	Ser	125	130	135	
Cys	Pro	Pro	Leu	Gly	Leu	Glu	Thr	Leu	Lys	Ile	Thr	Asp	Phe	Gln	140	145	150	
Leu	His	Ala	Ser	Thr	Val	Lys	Arg	Tyr	Gly	Leu	Gly	Ala	His	Arg	155	160	165	
Gly	Arg	Leu	Asn	Ile	Gln	Ala	Gly	Ile	Asn	Glu	Asn	Asp	Phe	Tyr	170	175	180	
Asp	Gly	Ala	Trp	Cys	Ala	Gly	Arg	Asn	Asp	Leu	Gln	Gln	Trp	Ile				

185					190					195				
Glu	Val	Asp	Ala	Arg	Arg	Leu	Thr	Arg	Phe	Thr	Gly	Val	Ile	Thr
				200					205					210
Gln	Gly	Arg	Asn	Ser	Leu	Trp	Leu	Ser	Asp	Trp	Val	Thr	Ser	Tyr
				215					220					225
Lys	Val	Met	Val	Ser	Asn	Asp	Ser	His	Thr	Trp	Val	Thr	Val	Lys
				230					235					240
Asn	Gly	Ser	Gly	Asp	Met	Ile	Phe	Glu	Gly	Asn	Ser	Glu	Lys	Glu
				245					250					255
Ile	Pro	Val	Leu	Asn	Glu	Leu	Pro	Val	Pro	Met	Val	Ala	Arg	Tyr
				260					265					270
Ile	Arg	Ile	Asn	Pro	Gln	Ser	Trp	Phe	Asp	Asn	Gly	Ser	Ile	Cys
				275					280					285
Met	Arg	Met	Glu	Ile	Leu	Gly	Cys	Pro	Leu	Pro	Asp	Pro	Asn	Asn
				290					295					300
Tyr	Tyr	His	Arg	Arg	Asn	Glu	Met	Thr	Thr	Thr	Asp	Asp	Leu	Asp
				305					310					315
Phe	Lys	His	His	Asn	Tyr	Lys	Glu	Met	Arg	Gln	Leu	Met	Lys	Val
				320					325					330
Val	Asn	Glu	Met	Cys	Pro	Asn	Ile	Thr	Arg	Ile	Tyr	Asn	Ile	Gly
				335					340					345
Lys	Ser	His	Gln	Gly	Leu	Lys	Leu	Tyr	Ala	Val	Glu	Ile	Ser	Asp
				350					355					360
His	Pro	Gly	Glu	His	Glu	Val	Gly	Glu	Pro	Glu	Phe	His	Tyr	Ile
				365					370					375
Ala	Gly	Ala	His	Gly	Asn	Glu	Val	Leu	Gly	Arg	Glu	Leu	Leu	Leu
				380					385					390
Leu	Leu	Val	Gln	Phe	Val	Cys	Gln	Glu	Tyr	Leu	Ala	Arg	Asn	Ala
				395					400					405
Arg	Ile	Val	His	Leu	Val	Glu	Glu	Thr	Arg	Ile	His	Val	Leu	Pro
				410					415					420
Ser	Leu	Asn	Pro	Asp	Gly	Tyr	Glu	Lys	Ala	Tyr	Glu	Gly	Gly	Ser
				425					430					435
Glu	Leu	Gly	Gly	Trp	Ser	Leu	Gly	Arg	Trp	Thr	His	Asp	Gly	Ile
				440					445					450
Asp	Ile	Asn	Asn	Asn	Phe	Pro	Asp	Leu	Asn	Thr	Leu	Leu	Trp	Glu
				455					460					465
Ala	Glu	Asp	Arg	Gln	Asn	Val	Pro	Arg	Lys	Val	Pro	Asn	His	Tyr
				470					475					480
Ile	Ala	Ile	Pro	Glu	Trp	Phe	Leu	Ser	Glu	Asn	Ala	Thr	Val	Ala
				485					490					495
Ala	Glu	Thr	Arg	Ala	Val	Ile	Ala	Trp	Met	Glu	Lys	Ile	Pro	Phe

500	505	510
Val Leu Gly Gly Asn Leu Gln Gly Gly 515	Glu Leu Val Val Ala Tyr 520	
Pro Tyr Asp Leu Val Arg Ser Pro Trp 530	Lys Thr Gln Glu His Thr 535	
Pro Thr Pro Asp Asp His Val Phe Arg 545	Trp Leu Ala Tyr Ser Tyr 550	
Ala Ser Thr His Arg Leu Met Thr Asp 560	Ala Arg Arg Arg Val Cys 565	
His Thr Glu Asp Phe Gln Lys Glu Glu 575	Gly Thr Val Asn Gly Ala 580	
Ser Trp His Thr Val Ala Gly Ser Leu 590	Asn Asp Phe Ser Tyr Leu 595	
His Thr Asn Cys Phe Glu Leu Ser Ile 605	Tyr Val Gly Cys Asp Lys 610	
Tyr Pro His Glu Ser Gln Leu Pro Glu 620	Glu Trp Glu Asn Asn Arg 625	
Glu Ser Leu Ile Val Phe Met Glu Gln 635	Val His Arg Gly Ile Lys 640	
Gly Leu Val Arg Asp Ser His Gly Lys 650	Gly Ile Pro Asn Ala Ile 655	
Ile Ser Val Glu Gly Ile Asn His Asp 665	Ile Arg Thr Ala Asn Asp 670	
Gly Asp Tyr Trp Arg Leu Leu Asn Pro 680	Gly Glu Tyr Val Val Thr 685	
Ala Lys Ala Glu Gly Phe Thr Ala Ser 695	Thr Lys Asn Cys Met Val 700	
Gly Tyr Asp Met Gly Ala Thr Arg Cys 710	Asp Phe Thr Leu Ser Lys 715	
Thr Asn Met Ala Arg Ile Arg Glu Ile 725	Met Glu Lys Phe Gly Lys 730	
Gln Pro Val Ser Leu Pro Ala Arg Arg 740	Leu Lys Leu Arg Gly Arg 745	
Lys Arg Arg Gln Arg Gly 755		

<210> 63

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 63

gttctcaatg agctaccggt cccc 24

<210> 64
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 64
cgcgatgtag tggaactcgg gctc 24

<210> 65
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 65
atccgcataa accctcagtc ctggtttgat aatgggagca tctgcatgag 50

<210> 66
<211> 2854
<212> DNA
<213> Homo sapiens

<400> 66
ctaagaggac aagatgaggc ccggcctctc atttctccta gcccttctgt 50
tcttccttgg ccaagctgca ggggatttgg gggatgtggg acctccaatt 100
cccagccccg gcttcagctc tttcccaggt gttgactcca gctccagctt 150
cagctccagc tccaggtcgg gctccagctc cagccgcagc ttaggcagcg 200
gaggttctgt gtcccagttg ttttccaatt tcaccggctc cgtggatgac 250
cgtgggacct gccagtgtc tgtttccttg ccagacacca cttttcccg 300
ggacagagtg gaacgcttgg aattcacagc tcatgttctt tctcagaagt 350
ttgagaaaaga actttctaaa gtgaggggaat atgtccaatt aattagtgtg 400
tatgaaaaga aactgttaaa cctaactgtc cgaattgaca tcatggagaa 450
ggataccatt tottacctg aactggactt cgagctgac aaggtagaag 500
tgaaggagat ggaaaaactg gtcatacagc tgaaggagag ttttggtgga 550
agctcagaaa ttgttgacca gctggagggtg gagataagaa atatgactct 600
cttggtagag aagcttgaga cactagacaa aaacaatgtc cttgccattc 650
gccgagaaat cgtggctctg aagaccaagc tgaaagagtg tgaggcctct 700
aaagatcaaa acaccctgt cgtccaccct cctcccactc cagggagctg 750
tggtcatggt ggtgtggtga acatcagcaa accgtctgtg gttcagctca 800
actggagagg gttttcttat ctatatggtg cttggggtag ggattactct 850
ccccagcatc caaacaagg actgtattgg gtggcgccat tgaatacaga 900

tgggagactg ttggagtatt atagactgta caacacactg gatgatttgc 950
 tattgtatat aaatgctcga gagttgcgga tcacctatgg ccaaggtagt 1000
 ggtacagcag tttaacaaca caacatgtac gtcaacatgt acaacacogg 1050
 gaatattgcc agagttaacc tgaccaccaa cacgattgct gtgactcaaa 1100
 ctctccctaa tgctgcctat aataaccgct tttcatatgc taatgttgct 1150
 tggcaagata ttgactttgc tgtggatgag aatggattgt gggttattta 1200
 ttcaactgaa gccagcactg gtaacatggt gattagtaaa ctcaatgaca 1250
 ccacacttca ggtgctaaac acttgggtata ccaagcagta taaaccatct 1300
 gcttctaacg ccttcatggt atgtgggggt ctgtatgcc acogtactat 1350
 gaacaccaga acagaagaga ttttttacta ttatgacaca aacacaggga 1400
 aagagggcaa actagacatt gtaatgcata agatgcagga aaaagtgcag 1450
 agcattaact ataacccttt tgaccagaaa ctttatgtct ataacgatgg 1500
 ttaccttctg aattatgatc tttctgtctt gcagaagccc cagtaagctg 1550
 tttaggagtt agggtgaaag agaaaatggt tgttgaaaa atagtcttct 1600
 ccacttactt agatatctgc aggggtgtct aaaagtgtgt tcattttgca 1650
 gcaatgttta ggtgcatagt tctaccacac tagagatcta ggacatttgt 1700
 cttgatttgg tgagttctct tgggaatcat ctgcctcttc aggcgcattt 1750
 tgcaataaag tctgtctagg gtgggattgt cagaggctca ggggcactgt 1800
 gggcctagtg aagcctactg tgaggaggct tcactagaag ccttaaatta 1850
 ggaattaagg aacttaaaac tcagtatggc gtctagggat tctttgtaca 1900
 ggaaatattg cccaatgact agtcctcatc catgtagcac cactaattct 1950
 tccatgcctg gaagaaacct ggggacttag ttaggtagat taatatctgg 2000
 agctcctcga gggaccaaact cccaacttt tttttccct cactagcacc 2050
 tggaatgatg ctttgtatgt ggcagataag taaatttggc atgcttatat 2100
 attctacatc tgtaaagtgc tgagttttat ggagagaggg ctttttatgc 2150
 attaaattgt acatggcaaa taaatcccag aaggatctgt agatgaggca 2200
 cctgcttttt cttttctctc attgtccacc ttactaaaag tcagtagaat 2250
 cttctacctc ataacttcct tccaaaggca gctcagaaga ttagaaccag 2300
 acttactaac caattccacc cccaccaac ccccttctac tgctacttt 2350
 aaaaaatta atagtcttct atggaactga tctaagatta gaaaaattaa 2400
 ttttcttta tttcattatg gacttttatt tacatgactc taagactata 2450
 agaaaatctg atggcagtga caaagtgcata gcatttattg ttatctaata 2500

aagaccttgg agcatatgtg caacttatga gtgtatcagt tgttgcatgt 2550
aatttttggc tttgtttaag cctggaactt gtaagaaaat gaaaatttaa 2600
tttttttttc taggacgagc tatagaaaag ctattgagag tatctagtta 2650
atcagtgcag tagttggaaa ccttgctggt gtatgtgatg tgcttctgtg 2700
cttttgaatg actttatcat ctagtctttg tctatttttc ctttgatggt 2750
caagtcctag tctataggat tggcagttta aatgctttac tccccctttt 2800
aaaataaatg attaaaatgt gctttgaaaa aaaaaaaaaa aaaaaaaaaa 2850
aaaa 2854

<210> 67

<211> 510

<212> PRT

<213> Homo sapiens

<400> 67

Met	Arg	Pro	Gly	Leu	Ser	Phe	Leu	Leu	Ala	Leu	Leu	Phe	Phe	Leu	1	5	10	15
Gly	Gln	Ala	Ala	Gly	Asp	Leu	Gly	Asp	Val	Gly	Pro	Pro	Ile	Pro	20	25	30	
Ser	Pro	Gly	Phe	Ser	Ser	Phe	Pro	Gly	Val	Asp	Ser	Ser	Ser	Ser	35	40	45	
Phe	Ser	Ser	Ser	Ser	Arg	Ser	Gly	Ser	Ser	Ser	Ser	Arg	Ser	Leu	50	55	60	
Gly	Ser	Gly	Gly	Ser	Val	Ser	Gln	Leu	Phe	Ser	Asn	Phe	Thr	Gly	65	70	75	
Ser	Val	Asp	Asp	Arg	Gly	Thr	Cys	Gln	Cys	Ser	Val	Ser	Leu	Pro	80	85	90	
Asp	Thr	Thr	Phe	Pro	Val	Asp	Arg	Val	Glu	Arg	Leu	Glu	Phe	Thr	95	100	105	
Ala	His	Val	Leu	Ser	Gln	Lys	Phe	Glu	Lys	Glu	Leu	Ser	Lys	Val	110	115	120	
Arg	Glu	Tyr	Val	Gln	Leu	Ile	Ser	Val	Tyr	Glu	Lys	Lys	Leu	Leu	125	130	135	
Asn	Leu	Thr	Val	Arg	Ile	Asp	Ile	Met	Glu	Lys	Asp	Thr	Ile	Ser	140	145	150	
Tyr	Thr	Glu	Leu	Asp	Phe	Glu	Leu	Ile	Lys	Val	Glu	Val	Lys	Glu	155	160	165	
Met	Glu	Lys	Leu	Val	Ile	Gln	Leu	Lys	Glu	Ser	Phe	Gly	Gly	Ser	170	175	180	
Ser	Glu	Ile	Val	Asp	Gln	Leu	Glu	Val	Glu	Ile	Arg	Asn	Met	Thr	185	190	195	
Leu	Leu	Val	Glu	Lys	Leu	Glu	Thr	Leu	Asp	Lys	Asn	Asn	Val	Leu	200	205	210	

Ala	Ile	Arg	Arg	Glu	Ile	Val	Ala	Leu	Lys	Thr	Lys	Leu	Lys	Glu	215	220	225
Cys	Glu	Ala	Ser	Lys	Asp	Gln	Asn	Thr	Pro	Val	Val	His	Pro	Pro	230	235	240
Pro	Thr	Pro	Gly	Ser	Cys	Gly	His	Gly	Gly	Val	Val	Asn	Ile	Ser	245	250	255
Lys	Pro	Ser	Val	Val	Gln	Leu	Asn	Trp	Arg	Gly	Phe	Ser	Tyr	Leu	260	265	270
Tyr	Gly	Ala	Trp	Gly	Arg	Asp	Tyr	Ser	Pro	Gln	His	Pro	Asn	Lys	275	280	285
Gly	Leu	Tyr	Trp	Val	Ala	Pro	Leu	Asn	Thr	Asp	Gly	Arg	Leu	Leu	290	295	300
Glu	Tyr	Tyr	Arg	Leu	Tyr	Asn	Thr	Leu	Asp	Asp	Leu	Leu	Leu	Tyr	305	310	315
Ile	Asn	Ala	Arg	Glu	Leu	Arg	Ile	Thr	Tyr	Gly	Gln	Gly	Ser	Gly	320	325	330
Thr	Ala	Val	Tyr	Asn	Asn	Asn	Met	Tyr	Val	Asn	Met	Tyr	Asn	Thr	335	340	345
Gly	Asn	Ile	Ala	Arg	Val	Asn	Leu	Thr	Thr	Asn	Thr	Ile	Ala	Val	350	355	360
Thr	Gln	Thr	Leu	Pro	Asn	Ala	Ala	Tyr	Asn	Asn	Arg	Phe	Ser	Tyr	365	370	375
Ala	Asn	Val	Ala	Trp	Gln	Asp	Ile	Asp	Phe	Ala	Val	Asp	Glu	Asn	380	385	390
Gly	Leu	Trp	Val	Ile	Tyr	Ser	Thr	Glu	Ala	Ser	Thr	Gly	Asn	Met	395	400	405
Val	Ile	Ser	Lys	Leu	Asn	Asp	Thr	Thr	Leu	Gln	Val	Leu	Asn	Thr	410	415	420
Trp	Tyr	Thr	Lys	Gln	Tyr	Lys	Pro	Ser	Ala	Ser	Asn	Ala	Phe	Met	425	430	435
Val	Cys	Gly	Val	Leu	Tyr	Ala	Thr	Arg	Thr	Met	Asn	Thr	Arg	Thr	440	445	450
Glu	Glu	Ile	Phe	Tyr	Tyr	Tyr	Asp	Thr	Asn	Thr	Gly	Lys	Glu	Gly	455	460	465
Lys	Leu	Asp	Ile	Val	Met	His	Lys	Met	Gln	Glu	Lys	Val	Gln	Ser	470	475	480
Ile	Asn	Tyr	Asn	Pro	Phe	Asp	Gln	Lys	Leu	Tyr	Val	Tyr	Asn	Asp	485	490	495
Gly	Tyr	Leu	Leu	Asn	Tyr	Asp	Leu	Ser	Val	Leu	Gln	Lys	Pro	Gln	500	505	510

<210> 68
 <211> 410
 <212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 206, 217, 387

<223> unknown base

<400> 68

gctctgaaga ccaagctgaa agagtgtgag gcctctaaag atcaaacacc 50
cctgtcgtcc accctcctcc cactccaggg agctgtggtc atggtggtgt 100
ggtgaacatc agcaaaccgt ctgtggttca gctcaactgg agaggggtttt 150
cttatctata tgggtgcttg ggtagggatt actctcccca gcatccaaac 200
aaaggnatgt attggngggc gccattgaat acagatggga gactgttgga 250
gtattataga ctgtacaacc cactggatga tttgctattg tatataaatg 300
ctcgagagtt gcggatcacc tatggccaag gtagtggtac agcagtttac 350
aacaacaaca tgtacgtcaa catgtacaac accgggnata ttgccagagt 400
taacctgacc 410

<210> 69

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 69

agctgtggtc atggtggtgt ggtg 24

<210> 70

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 70

ctaccttggc cataggtgat ccgc 24

<210> 71

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 71

catcagcaaa ccgtctgtgg ttcagctcaa ctggagaggg tt 42

<210> 72

<211> 3127

<212> DNA

<213> Homo sapiens

<400> 72

tctcgcagat agtaaataat ctccgaaaagg cgagaaagaa gctgtctcca 50
tcttgtctgt atccgctgct cttgtgacgt tgtggagatg gggagcgtcc 100
tggggctgtg ctccatggcg agctggatac catgtttgtg tggaagtgcc 150
ccgtgtttgc tatgccgatg ctgtcctagt ggaaacaact ccaactgtaac 200
tagattgatc tatgcacttt tcttgcttgt tggagtatgt gtagcttgtg 250
taatgttgat accaggaatg gaagaacaac tgaataagat tcctggattt 300
tgtgagaatg agaaagggtg tgtcccttgt aacattttgg ttggctataa 350
agctgtatat cgtttgtgct ttggtttggc tatgttctat cttcttctct 400
ctttactaat gatcaaagtg aagagtagca gtgacctag agctgcagtg 450
cacaatggat tttggttctt taaatttgcg gcagcaattg caattattat 500
tggggcattc ttcattccag aaggaaacttt tacaactgtg tggttttatg 550
taggcatggc aggtgccttt tgtttcatcc tcatacaact agtcttactt 600
attgattttg cacattcatg gaatgaatcg tgggttgaaa aaatggaaga 650
agggaaactc agatgttggc atgcagcctt gttatcagct acagctctga 700
attatctgct gtcttttagt gctatcgtcc tgttctttgt ctactacact 750
catccagcca gttgttcaga aaacaaggcg ttcacacagt tcaacatgct 800
cctctgcgtt ggtgcttctg taatgtctat actgccaaaa atccaagaat 850
cacaaccaag atctggtttg ttacagtctt cagtaattac agtctacaca 900
atgtatttga catggtcagc tatgaccaat gaaccagaaa caaattgcaa 950
cccaagtcta ctaagcataa ttggctacaa tacaacaagc actgtcccaa 1000
aggaagggca gtcagtccag tggtgccatg ctcaagggaat tataggacta 1050
attctctttt tgttgtgtgt attttattcc agcatccgta cttcaaaca 1100
tagtcagggt aataaactga ctctaacaag tgatgaatct acattaatag 1150
aagatggtg agctagaagt gatggatcac tggaggatgg ggacgatgtt 1200
caccgagctg tagataatga aagggatggg gtcacttaca gttattcctt 1250
ctttcacttc atgcttttcc tggcttccact ttatatcatg atgaccctta 1300
ccaactggc caggtatgaa ccctctcgtg agatgaaaag tcagtggaca 1350
gctgtctggg tgaaaatctc ttccagttgg attggcatcg tgctgtatgt 1400
ttggacactc gtggcaccac ttgttcttac aaatcgtgat tttgactgag 1450
tgagacttct agcatgaaag tccactttg attattgctt atttgaaaac 1500
agtattccca acttttgtaa agttgtgtat gtttttgctt cccatgtaac 1550

ttctccagtg ttctggcatg aattagattt tactgottgt ctttttgta 1600
 ttttcttacc aagtgcattg atatgtgaag tagaatgaat tgcagaggaa 1650
 agttttatga atatggtgat gagttagtaa aagtggccat tattgggctt 1700
 attctctgct ctatagttgt gaaatgaaga gtaaaaaaca atttgtttga 1750
 ctattttaaa attatattag accttaagct gtttttagcaa gcattaaagc 1800
 aaatgtatgg ctgccttttg aaatatattga tgtgtttgcct ggcaggatac 1850
 tgcaaagaac atgggtttatt ttaaaattta taaacaagtc acttaaagtc 1900
 cagttgtctg aaaaatctta taaggtttta cccttgatac ggaatttaca 1950
 caggtaggga gtgttttagtg gacaatagtg taggttatgg atggaggtgt 2000
 cggactaaa ttgaataacg agtaaataat cttacttggg tagagatggc 2050
 ctttgccaac aaagtgaact gttttggttg ttttaaactc atgaagtatg 2100
 gggtcagtgg aaatgtttg aactctgaag gatttagaca aggttttgaa 2150
 aaggataatc atgggttaga aggaagtgtt ttgaaagtca ctttgaaagt 2200
 tagttttggg ccagcacgg tagctcacc ttggtaatcc cagcactttg 2250
 ggagcttaag tgggtagatt acttgagccc aggaattcag accagcttgg 2300
 cacatggtga acctgttcta taaaaataat ctggctttga gcatatgcct 2350
 gtggtccagc actgagaggc tagtgaagat tgctgagccc agagccaaag 2400
 gttgcagtga gcaagtcacg tcaactgcact ctagctggca cagagtaagc 2450
 caaaaaaata tatatatatt gaaatcaagg aggcaaaatt ttgacaggga 2500
 aggaagtaac tgcaaaacca ctaggcttta gtaggtactt atataaaatc 2550
 tagtccagtt ctctcattta aaaaaatgaa gacactgaaa tacagactta 2600
 aatagctcag atagctaatt aggaaatttc aagttggcca ataatagcat 2650
 tctctctgac atttaaaaat aatttctatt caaaatacat gcatattgat 2700
 ttacacctca tactgtgata attaatgtga tgtggattgc tgggtgccag 2750
 catgacccat aaacaggta gaagaatgat ggaatgtttt agaataaaact 2800
 cctgcttata gtatactaca cagttcaaaa gatgtttaa atgcttttgt 2850
 atttactgcc atgtaattga aatatataga ttattgtaac ctttcaacct 2900
 gaaaatcaag cagtatgaga gtttagttat ttgtatgtgt cactagtgtc 2950
 taatgaagct tttaaaatct acaatttctt ctttaaaaat atttattaat 3000
 gtgaatggaa tataacaatt cagcttaatt cccaacctt attctgtgtg 3050
 tagacattgt attccacaat tttgaatggc tgtgttttac ctctaaataa 3100
 atgaattcag agaaaaaaaa aaaaaaa 3127

<210> 73
 <211> 453
 <212> PRT
 <213> Homo sapiens

<400> 73

Met	Gly	Ser	Val	Leu	Gly	Leu	Cys	Ser	Met	Ala	Ser	Trp	Ile	Pro
1				5					10					15
Cys	Leu	Cys	Gly	Ser	Ala	Pro	Cys	Leu	Leu	Cys	Arg	Cys	Cys	Pro
				20					25					30
Ser	Gly	Asn	Asn	Ser	Thr	Val	Thr	Arg	Leu	Ile	Tyr	Ala	Leu	Phe
				35					40					45
Leu	Leu	Val	Gly	Val	Cys	Val	Ala	Cys	Val	Met	Leu	Ile	Pro	Gly
				50					55					60
Met	Glu	Glu	Gln	Leu	Asn	Lys	Ile	Pro	Gly	Phe	Cys	Glu	Asn	Glu
				65					70					75
Lys	Gly	Val	Val	Pro	Cys	Asn	Ile	Leu	Val	Gly	Tyr	Lys	Ala	Val
				80					85					90
Tyr	Arg	Leu	Cys	Phe	Gly	Leu	Ala	Met	Phe	Tyr	Leu	Leu	Leu	Ser
				95					100					105
Leu	Leu	Met	Ile	Lys	Val	Lys	Ser	Ser	Ser	Asp	Pro	Arg	Ala	Ala
				110					115					120
Val	His	Asn	Gly	Phe	Trp	Phe	Phe	Lys	Phe	Ala	Ala	Ala	Ile	Ala
				125					130					135
Ile	Ile	Ile	Gly	Ala	Phe	Phe	Ile	Pro	Glu	Gly	Thr	Phe	Thr	Thr
				140					145					150
Val	Trp	Phe	Tyr	Val	Gly	Met	Ala	Gly	Ala	Phe	Cys	Phe	Ile	Leu
				155					160					165
Ile	Gln	Leu	Val	Leu	Leu	Ile	Asp	Phe	Ala	His	Ser	Trp	Asn	Glu
				170					175					180
Ser	Trp	Val	Glu	Lys	Met	Glu	Glu	Gly	Asn	Ser	Arg	Cys	Trp	Tyr
				185					190					195
Ala	Ala	Leu	Leu	Ser	Ala	Thr	Ala	Leu	Asn	Tyr	Leu	Leu	Ser	Leu
				200					205					210
Val	Ala	Ile	Val	Leu	Phe	Phe	Val	Tyr	Tyr	Thr	His	Pro	Ala	Ser
				215					220					225
Cys	Ser	Glu	Asn	Lys	Ala	Phe	Ile	Ser	Val	Asn	Met	Leu	Leu	Cys
				230					235					240
Val	Gly	Ala	Ser	Val	Met	Ser	Ile	Leu	Pro	Lys	Ile	Gln	Glu	Ser
				245					250					255
Gln	Pro	Arg	Ser	Gly	Leu	Leu	Gln	Ser	Ser	Val	Ile	Thr	Val	Tyr
				260					265					270
Thr	Met	Tyr	Leu	Thr	Trp	Ser	Ala	Met	Thr	Asn	Glu	Pro	Glu	Thr
				275					280					285

Asn	Cys	Asn	Pro	Ser	Leu	Leu	Ser	Ile	Ile	Gly	Tyr	Asn	Thr	Thr
				290					295					300
Ser	Thr	Val	Pro	Lys	Glu	Gly	Gln	Ser	Val	Gln	Trp	Trp	His	Ala
				305					310					315
Gln	Gly	Ile	Ile	Gly	Leu	Ile	Leu	Phe	Leu	Leu	Cys	Val	Phe	Tyr
				320					325					330
Ser	Ser	Ile	Arg	Thr	Ser	Asn	Asn	Ser	Gln	Val	Asn	Lys	Leu	Thr
				335					340					345
Leu	Thr	Ser	Asp	Glu	Ser	Thr	Leu	Ile	Glu	Asp	Gly	Gly	Ala	Arg
				350					355					360
Ser	Asp	Gly	Ser	Leu	Glu	Asp	Gly	Asp	Asp	Val	His	Arg	Ala	Val
				365					370					375
Asp	Asn	Glu	Arg	Asp	Gly	Val	Thr	Tyr	Ser	Tyr	Ser	Phe	Phe	His
				380					385					390
Phe	Met	Leu	Phe	Leu	Ala	Ser	Leu	Tyr	Ile	Met	Met	Thr	Leu	Thr
				395					400					405
Asn	Trp	Ser	Arg	Tyr	Glu	Pro	Ser	Arg	Glu	Met	Lys	Ser	Gln	Trp
				410					415					420
Thr	Ala	Val	Trp	Val	Lys	Ile	Ser	Ser	Ser	Trp	Ile	Gly	Ile	Val
				425					430					435
Leu	Tyr	Val	Trp	Thr	Leu	Val	Ala	Pro	Leu	Val	Leu	Thr	Asn	Arg
				440					445					450

Asp Phe Asp

<210> 74
 <211> 480
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 48, 163
 <223> unknown base

<400> 74
 gcgagaaaga agctgtctcc atcttgtctg tatcccgtg cttcttnga 50
 cgttgtggag atggggagcg tccctggggc tgtgctccat ggcgagctgg 100
 ataccatggt tgtgtggaag tgccccgtgt ttgctatgcc gatgctgtcc 150
 tagtggaaac aantocactg taactagatt gatctatgca cttttcttgc 200
 ttgttggagt atgtgtagct tgtgtaatgt tgataccagg aatggaagaa 250
 caactgaata agattcctgg attttgtgag aatgagaaag gtgttgtccc 300
 ttgtaacatt ttggttggct ataaagctgt atatcgtttg tgctttgggt 350
 tggctatggt ctatcttctt ctctctttac taatgatcaa agtgaagagt 400

agcagtgatc ctagagctgc agtgcacaat ggattttggt tctttaaatt 450
tgctgcagca attgcaatta ttattggggc 480

<210> 75
<211> 438
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 32, 65, 92, 121, 142, 154, 170, 293, 315, 323
<223> unknown base

<400> 75
gttattgtga actttgtgga gatgggaggt ontggggctg tgttccatgg 50
cgagctggat accangtttg tgtggaagtg ccccggtgtt gntatgccga 100
tgctgtccta gtggaacaa ntccactgta attagattga tntatgcact 150
ttntttgctt gttggagtan gtgtagcttg tgtaatgttg ataccaggaa 200
tggaagaaca actgaataag attcctggat tttgtgagaa tgagaaaggt 250
gttgtccctt gtaacatttt gtttggtctat aaagctgtat atngtttgtg 300
ctttggtttg gctangttct atnttcttct ctctttacta atgatcaaag 350
tgaagagtag cagtgatcct agagctgcag tgcacaatgg attttggttt 400
tttaaatttg ctgcagcaat tgcaattatt attggggc 438

<210> 76
<211> 473
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 48
<223> unknown base

<400> 76
aagaagctgt ctccatcttg tctgtatccg ctgctcttgt gaacgttntg 50
gagatgggga gcgtccttgg ggttgtgctc catggcgagc tggataccat 100
gtttgtgtgg aagtgccccg tgtttgctat gccgatgctg tcctagtggg 150
aacaactcca ctgtaactag attgatctat gcacttttct tgcttggttg 200
agtatgtgta gcttgtgtaa tgttgatacc aggaatggaa gaacaactga 250
ataagattcc tggattttgt gagaatgaga aaggtgttgt cccttgtaac 300
attttggttg gctataaagc tgtatatcgt ttgtgctttg gtttggtctat 350
gttctatctt cttctctctt tactaatgat caaagtgaag agtagcagtg 400
atcctagagc tgcagtgcac aatggatttt gggtcttttaa atttgctgca 450
gcaattgcaa ttattattgg ggc 473

<210> 77
<211> 666
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 21, 111
<223> unknown base

<400> 77
gctgtcctta gtggaaacaa ntccaacttg taacttggat tgatctatgc 50
actttttcct tgcttgttgg agtatgtgta gctttgtgta atgttgttcc 100
caggattgga ngaacaactg aataagattc ctggattttt gtgagaatga 150
gaaaggtgtt gtccccttgt aacatttttg gttggctata aagctgtata 200
tcgtttgtgc tttggtttgg ctatgttcta tcttcttctc tctttactaa 250
tgatcaaagt gaagagtagc agtgatccta gagctgcagt gcacaatgga 300
ttttggttct ttaaatttgc tgcagcaatt gcaattatta ttggggcatt 350
cttcattcca gaaggaactt ttacaactgt gtggttttat gtaggcattg 400
caggtgcctt ttgtttcatc ctcatacaac tagtcttact tattgatttt 450
gcacattcat ggaatgaatc gtgggttgaa aaaatggaag aagggaactc 500
gagatgttgg tatgcagcct tggtatcagc tacagctctg aattatctgc 550
tgtctttagt tgctatcgtc ctgttctttg tctactaac tcattccagcc 600
agttgttcag aaaacaaggc gttcatcagt gtcaacatgc tcctctgcgt 650
tggtgcttct gtaatg 666

<210> 78
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 78
atgtttgtgt ggaagtgccc cg 22

<210> 79
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 79
gtcaacatgc tcctctgc 18

<210> 80
<211> 26

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 80
aatccattgt gcactgcagc tctagg 26

<210> 81
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 81
gagcatgccca ccactggact gac 23

<210> 82
<211> 54
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 82
gccgatgctg tcttagtgga aacaactcca ctgtaactag attgatctat 50
gcac 54

<210> 83
<211> 3906
<212> DNA
<213> Homo sapiens

<400> 83
ctcgggcgcg cacaggcagc tcggtttgcc ctgcgattga gctgcggggtc 50
gcgggccggcg ccggcctctc caatggcaaa tgtgtgtggc tggaggcgag 100
cgcgaggctt tcggcaaagg cagtcgagtg tttgcagacc ggggagagtc 150
ctgtgaaagc agataaaaga aaacatttat taacgtgtca ttacgagggg 200
agcgcccgcg cggggctgtc gcactccccg cggaacattt ggctccctcc 250
agctccgaga gaggagaaga agaaagcgga aaagaggcag attcacgtcg 300
tttcagcca agtggacctg atcgatggcc ctctgaatt tatcacgata 350
tttgatttat tagcgatgcc ccttggtttg tgtgttacgc acacacacgt 400
gcacacaagg ctctggctcg cttccctccc tcgtttccag ctctggggcg 450
aatcccacat ctgtttcaac tctccgccga gggcgagcag gagcgagagt 500
gtgtcgaatc tgcgagtga gagggacgag ggaaaagaaa caaagccaca 550
gacgcaactt gagactcccc catccccaaa gaagcaccag atcagcaaaa 600

aaagaagatg ggccccccga gcctcgtgct gtgcttgctg tccgcaactg 650
tggtctccct gctgggtgga agctcggcct tctgtcgca ccaccgctg 700
aaaggcaggt ttcagaggga ccgcaggaac atccgccccca acatcatcct 750
ggtgctgacg gacgaccagg atgtggagct gggttccatg caggatga 800
acaagacccg gcgcatcatg gagcagggcg gggcgactt catcaacgcc 850
ttcgtgacca caccatgtg ctgccccca cgtctctcca tctcactgg 900
caagtacgtc cacaaccaca acacctacac caacaatgag aactgctcct 950
cgccctcctg gcaggcacag cagcagagcc gcacctttgc cgtgtacctc 1000
aatagcactg gctaccggac agctttcttc ggggaagtatc ttaatgaata 1050
caacggctcc tacgtgccac ccggttgaa ggagtgggtc ggactcctta 1100
aaaactcccg cttttataac tacacgctgt gtcggaacgg ggtgaaagag 1150
aagcacggct ccgactactc caaggattac ctacagacc tcatcaccaa 1200
tgacagcgtg agcttcttcc gcacgtccaa gaagatgtac ccgcacaggc 1250
cagtcctcat ggtcatcagc catgcagccc cccacggccc tgaggattca 1300
gccccacaat attcacgcct cttcccaaac gcctctcagc acatcacgcc 1350
gagctacaac tacgcgcccc acccggaaca aactggatc atgcgctaca 1400
cggggcccat gaagcccatc cacatggaat tcaccaacat gctccagcgg 1450
aagcgttgc agaccctcat gtcggtggac gactccatgg agacgattta 1500
caacatgctg gttgagacgg gcgagctgga caacacgtac atcgtataca 1550
ccgccgacca cggttaccac atcggccagt ttggcctggt gaaagggaaa 1600
tccatgccat atgagtttga catcagggtc ccgttctacg tgagggggccc 1650
caacgtggaa gccggtgtc tgaatcccca catcgtcttc aacattgacc 1700
tggtcccccac catcctggac attgcaggcc tggacatacc tgcggatatg 1750
gacgggaaat ccacctcaa gctgctggac acggagcggc cggatgaatc 1800
gtttcacttg aaaaagaaga tgaggggtctg gcgggactcc ttcttggtg 1850
agagaggcaa gctgctacac aagagagaca atgacaagg ggacgcccag 1900
gaggagaact ttctgcccc gtaccagcgt gtgaaggacc tgtgtcagcg 1950
tgctgagtac cagacggcgt gtgagcagct gggacagaag tggcagtgtg 2000
tggaggacgc cacggggaag ctgaagctgc ataagtcaa gggcccatg 2050
cggctgggcg gcagcagagc cctctccaac ctctgtccca agtactacgg 2100
gcagggcagc gaggcctgca cctgtgacag cggggactac aagctcagcc 2150
tggccggacg ccggaaaaaa ctcttcaaga agaagtacaa ggccagctat 2200

gtccgcagtc gctccatccg ctcaagtggcc atcgaggtgg acggcagggg 2250
 gtaccacgta ggcctgggtg atgccgccca gccccgaaac ctcaccaagc 2300
 ggcaactggcc agggggcccct gaggaccaag atgacaagga tgggtggggac 2350
 ttcagtggca ctggaggcct tcccgaactac tcagccgcca accccattaa 2400
 agtgacacat cgggtgctaca tcctagagaa cgacacagtc cagtgtgacc 2450
 tggacctgta caagtccctg caggcctgga aagaccacaa gctgcacatc 2500
 gaccacgaga ttgaaaccct gcagaacaaa attaagaacc tgaggggaagt 2550
 ccgaggtcac ctgaagaaaa agcggccaga agaattgtgac tgtcacaaaa 2600
 tcagctacca caccagcac aaaggccgcc tcaagcacag aggctccagt 2650
 ctgcatcctt tcaggaaggc cctgcaagag aaggacaagg tgtggctgtt 2700
 gcgggagcag aagcgcaaga agaaactccg caagctgctc aagcgctgc 2750
 agaacaacga cacgtgcagc atgccaggcc tcacgtgctt caccacgac 2800
 aaccagcact ggcagacggc gcctttcttg aactggggc ctttctgtgc 2850
 ctgcaccagc gccacaata acacgtactg gtgcatgagg accatcaatg 2900
 agactcaciaa tttcctcttc tgtgaatttg caactggctt cctagagtac 2950
 tttgatctca acacagaccc ctaccagctg atgaatgcag tgaacacact 3000
 ggacagggat gtcctcaacc agctacacgt acagctcatg gagctgagga 3050
 gctgcaaggg ttacaagcag tgtaaccccc ggactcgaaa catggacctg 3100
 gatggaggaa gctatgagca atacaggcag tttcagcgtc gaaagtggcc 3150
 agaaatgaag agaccttctt ccaaatcact gggacaactg tgggaaggct 3200
 ggggaaggta agaaacaaca gaggtggacc tccaaaaaca tagaggcatc 3250
 acctgactgc acaggcaatg aaaaaccatg tgggtgattt ccagcagacc 3300
 tgtgctattg gccaggaggc ctgagaaagc aagcacgcac tctcagtcaa 3350
 catgacagat tctggaggat aaccagcagg agcagagata acttcaggaa 3400
 gtccatTTTT gcccctgctt ttgctttgga ttataacctca ccagctgcac 3450
 aaaatgcatt ttttctgata aaaaagtcac cactaacct ccccagaag 3500
 ctcacaaagg aaaacggaga gagcgagcga gagagatttc cttggaaatt 3550
 tctcccaagg gcgaaagtca ttggaatttt taaatcatag gggaaaagca 3600
 gtctgtttct aaatcctctt attcttttgg tttgtcacia agaaggaaact 3650
 aagaagcagg acagaggcaa cgtggagagg ctgaaaacag tgcagagacg 3700
 tttgacaatg agtcagtagc aaaaagaga tgacatttac ctagcactat 3750
 aaacctgggt tgctctgaa gaaactgcct tcattgtata tatgtgacta 3800

tttacatgta atcaacatgg gaacttttag gggaacctaa taagaaatcc 3850
 caatttttcag gagtggtggt gtcaataaac gctctgtggc cagtgtaaaa 3900
 gaaaaa 3906

<210> 84
 <211> 867
 <212> PRT
 <213> Homo sapiens

<400> 84
 Met Gly Pro Pro Ser Leu Val Leu Cys Leu Leu Ser Ala Thr Val
 1 5 10 15
 Phe Ser Leu Leu Gly Gly Ser Ser Ala Phe Leu Ser His His Arg
 20 25 30
 Leu Lys Gly Arg Phe Gln Arg Asp Arg Arg Asn Ile Arg Pro Asn
 35 40 45
 Ile Ile Leu Val Leu Thr Asp Asp Gln Asp Val Glu Leu Gly Ser
 50 55 60
 Met Gln Val Met Asn Lys Thr Arg Arg Ile Met Glu Gln Gly Gly
 65 70 75
 Ala His Phe Ile Asn Ala Phe Val Thr Thr Pro Met Cys Cys Pro
 80 85 90
 Ser Arg Ser Ser Ile Leu Thr Gly Lys Tyr Val His Asn His Asn
 95 100 105
 Thr Tyr Thr Asn Asn Glu Asn Cys Ser Ser Pro Ser Trp Gln Ala
 110 115 120
 Gln His Glu Ser Arg Thr Phe Ala Val Tyr Leu Asn Ser Thr Gly
 125 130 135
 Tyr Arg Thr Ala Phe Phe Gly Lys Tyr Leu Asn Glu Tyr Asn Gly
 140 145 150
 Ser Tyr Val Pro Pro Gly Trp Lys Glu Trp Val Gly Leu Leu Lys
 155 160 165
 Asn Ser Arg Phe Tyr Asn Tyr Thr Leu Cys Arg Asn Gly Val Lys
 170 175 180
 Glu Lys His Gly Ser Asp Tyr Ser Lys Asp Tyr Leu Thr Asp Leu
 185 190 195
 Ile Thr Asn Asp Ser Val Ser Phe Phe Arg Thr Ser Lys Lys Met
 200 205 210
 Tyr Pro His Arg Pro Val Leu Met Val Ile Ser His Ala Ala Pro
 215 220 225
 His Gly Pro Glu Asp Ser Ala Pro Gln Tyr Ser Arg Leu Phe Pro
 230 235 240
 Asn Ala Ser Gln His Ile Thr Pro Ser Tyr Asn Tyr Ala Pro Asn
 245 250 255

Pro	Asp	Lys	His	Trp	Ile	Met	Arg	Tyr	Thr	Gly	Pro	Met	Lys	Pro	260	265	270
Ile	His	Met	Glu	Phe	Thr	Asn	Met	Leu	Gln	Arg	Lys	Arg	Leu	Gln	275	280	285
Thr	Leu	Met	Ser	Val	Asp	Asp	Ser	Met	Glu	Thr	Ile	Tyr	Asn	Met	290	295	300
Leu	Val	Glu	Thr	Gly	Glu	Leu	Asp	Asn	Thr	Tyr	Ile	Val	Tyr	Thr	305	310	315
Ala	Asp	His	Gly	Tyr	His	Ile	Gly	Gln	Phe	Gly	Leu	Val	Lys	Gly	320	325	330
Lys	Ser	Met	Pro	Tyr	Glu	Phe	Asp	Ile	Arg	Val	Pro	Phe	Tyr	Val	335	340	345
Arg	Gly	Pro	Asn	Val	Glu	Ala	Gly	Cys	Leu	Asn	Pro	His	Ile	Val	350	355	360
Leu	Asn	Ile	Asp	Leu	Ala	Pro	Thr	Ile	Leu	Asp	Ile	Ala	Gly	Leu	365	370	375
Asp	Ile	Pro	Ala	Asp	Met	Asp	Gly	Lys	Ser	Ile	Leu	Lys	Leu	Leu	380	385	390
Asp	Thr	Glu	Arg	Pro	Val	Asn	Arg	Phe	His	Leu	Lys	Lys	Lys	Met	395	400	405
Arg	Val	Trp	Arg	Asp	Ser	Phe	Leu	Val	Glu	Arg	Gly	Lys	Leu	Leu	410	415	420
His	Lys	Arg	Asp	Asn	Asp	Lys	Val	Asp	Ala	Gln	Glu	Glu	Asn	Phe	425	430	435
Leu	Pro	Lys	Tyr	Gln	Arg	Val	Lys	Asp	Leu	Cys	Gln	Arg	Ala	Glu	440	445	450
Tyr	Gln	Thr	Ala	Cys	Glu	Gln	Leu	Gly	Gln	Lys	Trp	Gln	Cys	Val	455	460	465
Glu	Asp	Ala	Thr	Gly	Lys	Leu	Lys	Leu	His	Lys	Cys	Lys	Gly	Pro	470	475	480
Met	Arg	Leu	Gly	Gly	Ser	Arg	Ala	Leu	Ser	Asn	Leu	Val	Pro	Lys	485	490	495
Tyr	Tyr	Gly	Gln	Gly	Ser	Glu	Ala	Cys	Thr	Cys	Asp	Ser	Gly	Asp	500	505	510
Tyr	Lys	Leu	Ser	Leu	Ala	Gly	Arg	Arg	Lys	Lys	Leu	Phe	Lys	Lys	515	520	525
Lys	Tyr	Lys	Ala	Ser	Tyr	Val	Arg	Ser	Arg	Ser	Ile	Arg	Ser	Val	530	535	540
Ala	Ile	Glu	Val	Asp	Gly	Arg	Val	Tyr	His	Val	Gly	Leu	Gly	Asp	545	550	555
Ala	Ala	Gln	Pro	Arg	Asn	Leu	Thr	Lys	Arg	His	Trp	Pro	Gly	Ala	560	565	570

Pro	Glu	Asp	Gln	Asp	Asp	Lys	Asp	Gly	Gly	Asp	Phe	Ser	Gly	Thr	
				575					580					585	
Gly	Gly	Leu	Pro	Asp	Tyr	Ser	Ala	Ala	Asn	Pro	Ile	Lys	Val	Thr	
				590					595					600	
His	Arg	Cys	Tyr	Ile	Leu	Glu	Asn	Asp	Thr	Val	Gln	Cys	Asp	Leu	
				605					610					615	
Asp	Leu	Tyr	Lys	Ser	Leu	Gln	Ala	Trp	Lys	Asp	His	Lys	Leu	His	
				620					625					630	
Ile	Asp	His	Glu	Ile	Glu	Thr	Leu	Gln	Asn	Lys	Ile	Lys	Asn	Leu	
				635					640					645	
Arg	Glu	Val	Arg	Gly	His	Leu	Lys	Lys	Lys	Arg	Pro	Glu	Glu	Cys	
				650					655					660	
Asp	Cys	His	Lys	Ile	Ser	Tyr	His	Thr	Gln	His	Lys	Gly	Arg	Leu	
				665					670					675	
Lys	His	Arg	Gly	Ser	Ser	Leu	His	Pro	Phe	Arg	Lys	Gly	Leu	Gln	
				680					685					690	
Glu	Lys	Asp	Lys	Val	Trp	Leu	Leu	Arg	Glu	Gln	Lys	Arg	Lys	Lys	
				695					700					705	
Lys	Leu	Arg	Lys	Leu	Leu	Lys	Arg	Leu	Gln	Asn	Asn	Asp	Thr	Cys	
				710					715					720	
Ser	Met	Pro	Gly	Leu	Thr	Cys	Phe	Thr	His	Asp	Asn	Gln	His	Trp	
				725					730					735	
Gln	Thr	Ala	Pro	Phe	Trp	Thr	Leu	Gly	Pro	Phe	Cys	Ala	Cys	Thr	
				740					745					750	
Ser	Ala	Asn	Asn	Asn	Thr	Tyr	Trp	Cys	Met	Arg	Thr	Ile	Asn	Glu	
				755					760					765	
Thr	His	Asn	Phe	Leu	Phe	Cys	Glu	Phe	Ala	Thr	Gly	Phe	Leu	Glu	
				770					775					780	
Tyr	Phe	Asp	Leu	Asn	Thr	Asp	Pro	Tyr	Gln	Leu	Met	Asn	Ala	Val	
				785					790					795	
Asn	Thr	Leu	Asp	Arg	Asp	Val	Leu	Asn	Gln	Leu	His	Val	Gln	Leu	
				800					805					810	
Met	Glu	Leu	Arg	Ser	Cys	Lys	Gly	Tyr	Lys	Gln	Cys	Asn	Pro	Arg	
				815					820					825	
Thr	Arg	Asn	Met	Asp	Leu	Asp	Gly	Gly	Ser	Tyr	Glu	Gln	Tyr	Arg	
				830					835					840	
Gln	Phe	Gln	Arg	Arg	Lys	Trp	Pro	Glu	Met	Lys	Arg	Pro	Ser	Ser	
				845					850					855	
Lys	Ser	Leu	Gly	Gln	Leu	Trp	Glu	Gly	Trp	Glu	Gly				
				860					865						

<210> 85
 <211> 19
 <212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 85

gaagccggct gtctgaatc 19

<210> 86

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 86

ggccagctat ctccgcag 18

<210> 87

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 87

aagggcctgc aagagaag 18

<210> 88

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 88

cactgggaca actgtggg 18

<210> 89

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 89

cagaggcaac gtggagag 18

<210> 90

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 90

aagtattgtc atacagtgtt c 21

<210> 91
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 91
tagtacttgg gcaacgaggtt ggag 24

<210> 92
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 92
tcataccaac tgctgggtcat tggc 24

<210> 93
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 93
ctcaagctgc tggacacgga gcgccggtg aatcggtttc acttg 45

<210> 94
<211> 971
<212> DNA
<213> Homo sapiens

<400> 94
aacaaagtgc agtgactgag agggctgagc ggaggctgct gaaggggaga 50
aaggagtgag gagctgctgg gcagagaggg actgtccggc tcccagatgc 100
tgggcctcct ggggagcaca gccctcgtgg gatggatcac aggtgctgct 150
gtggcgggtcc tgctgctgct gctgctgctg gccacctgcc ttttccacgg 200
acggcaggac tgtgacgtgg agaggaaccg tacagctgca gggggaacc 250
gagtcgcgcg ggcccagcct tggcccttcc ggcggcgggg ccacctggga 300
atctttcacc atcacctgca tcttgccac gtatctcatg tgccgaatgt 350
gggcctccac caccaccacc acccccgcca caccctcac cacctccacc 400
accaccacca cccccaccgc caccatcccc gccacgctcg ctgaggctgc 450
tgtgcgcggt gcctgtggac agcagctgcc cctgccttcc catctgttcc 500
caggacaagt ggaccccatg tttccatgtg gaaggatgca tctctggggt 550
gaacgagggg aacaatagac tggggcttgc tccagctgca tttgcatggc 600

atgccccagt gtactatggc agcagagaat ggaggaacac tgggtctgca 650
 gtgctgaagg gtttggggag tggagagcaa ggggtgctctt tcggggctgg 700
 acagcccgtc ttgtgacagt gactcccagt gagccccaga aatgacaagc 750
 gtgtcttggc agagccagca cacaagtgga tgtgaagtgc ccgtcttgac 800
 ctccatcatca ggctgctgca ggcctctggc gggcagggca ctgggagagg 850
 ccctgagaat gtccttttgg tttggagaag gcagtgtgag gctgcacagt 900
 caattcatcg gtgccttagt ccaagaaaat aaaaaccact aagaagcttt 950
 aaaaaaaaaa aaaaaaaaaa a 971

<210> 95
 <211> 115
 <212> PRT
 <213> Homo sapiens

<400> 95
 Met Leu Gly Leu Leu Gly Ser Thr Ala Leu Val Gly Trp Ile Thr
 1 5 10 15
 Gly Ala Ala Val Ala Val Leu Leu Leu Leu Leu Leu Ala Thr
 20 25 30
 Cys Leu Phe His Gly Arg Gln Asp Cys Asp Val Glu Arg Asn Arg
 35 40 45
 Thr Ala Ala Gly Gly Asn Arg Val Arg Arg Ala Gln Pro Trp Pro
 50 55 60
 Phe Arg Arg Arg Gly His Leu Gly Ile Phe His His His Arg His
 65 70 75
 Pro Gly His Val Ser His Val Pro Asn Val Gly Leu His His His
 80 85 90
 His His Pro Arg His Thr Pro His His Leu His His His His His
 95 100 105
 Pro His Arg His His Pro Arg His Ala Arg
 110 115

<210> 96
 <211> 1312
 <212> DNA
 <213> Homo sapiens

<400> 96
 ggcggctgct gagctgcctt gaggtgcagt gttggggatc cagagccatg 50
 tcggacctgc tactactggg cctgattggg ggcctgactc tcttactgct 100
 gctgacgctg ctggcctttg ccgggtactc agggctactg gctgggggtg 150
 aagtgagtgc tgggtcacc cccatccgca acgtcactgt ggctacaag 200
 ttccacatgg ggctctatgg tgagactggg cggttttca ctgagagctg 250
 cagcatctct cccaagctcc gctccatgc tgtctactat gacaaccccc 300

acatggtgcc ccctgataag tgccgatgtg ccgtgggcag catcctgagt 350
 gaaggtgagg aatcgccctc ccctgagctc atcgacctct accagaaatt 400
 tggcttcaag gtgtttctct tcccggcacc cagccatgtg gtgacagcca 450
 ctttccccta caccaccatt ctgtccatct ggctggctac ccgccgtgtc 500
 catcctgcct tggacaccta catcaaggag cggaagctgt gtgcctatcc 550
 tcggctggag atctaccagg aagaccagat ccatttcatg tgcccactgg 600
 cacggcaggg agacttctat gtgcctgaga tgaaggagac agagtggaaa 650
 tggcgggggc ttgtggaggc cattgacacc caggtggatg gcacaggagc 700
 tgacacaatg agtgacacga gttctgtaag cttggaagtg agccctggca 750
 gccgggagac ttcagctgcc acactgtcac ctggggcgag cagccgtggc 800
 tgggatgacg gtgacacccg cagcgagcac agctacagcg agtcaggtgc 850
 cagcggctcc tcttttgagg agctggactt ggagggcgag gggcccttag 900
 gggagtcacg gctggaccct gggactgagc ccctggggac taccaagtgg 950
 ctctgggagc cactgcccc tgagaagggc aaggagtaac ccatggcctg 1000
 caccctctg cagtgcagtt gctgaggaac tgagcagact ctccagcaga 1050
 ctctccagcc ctcttctcc ttcctctggg ggaggagggg ttcctgaggg 1100
 acctgacttc ccctgtcca ggcctcttgc taagccttct cctcactgcc 1150
 ctttaggtc ccagggccag aggagccagg gactattttc tgcaccagcc 1200
 cccagggctg ccgcccctgt tgtgtctttt tttcagactc acagtggagc 1250
 ttccaggacc cagaataaag ccaatgattt acttgtttca cctggaaaaa 1300
 aaaaaaaaaa aa 1312

<210> 97

<211> 313

<212> PRT

<213> Homo sapiens

<400> 97

Met	Ser	Asp	Leu	Leu	Leu	Leu	Gly	Leu	Ile	Gly	Gly	Leu	Thr	Leu
1				5					10					15
Leu	Leu	Leu	Leu	Thr	Leu	Leu	Ala	Phe	Ala	Gly	Tyr	Ser	Gly	Leu
				20					25					30
Leu	Ala	Gly	Val	Glu	Val	Ser	Ala	Gly	Ser	Pro	Pro	Ile	Arg	Asn
				35					40					45
Val	Thr	Val	Ala	Tyr	Lys	Phe	His	Met	Gly	Leu	Tyr	Gly	Glu	Thr
				50					55					60
Gly	Arg	Leu	Phe	Thr	Glu	Ser	Cys	Ser	Ile	Ser	Pro	Lys	Leu	Arg
				65					70					75

Ser	Ile	Ala	Val	Tyr	Tyr	Asp	Asn	Pro	His	Met	Val	Pro	Pro	Asp	
				80					85					90	
Lys	Cys	Arg	Cys	Ala	Val	Gly	Ser	Ile	Leu	Ser	Glu	Gly	Glu	Glu	
				95					100					105	
Ser	Pro	Ser	Pro	Glu	Leu	Ile	Asp	Leu	Tyr	Gln	Lys	Phe	Gly	Phe	
				110					115					120	
Lys	Val	Phe	Ser	Phe	Pro	Ala	Pro	Ser	His	Val	Val	Thr	Ala	Thr	
				125					130					135	
Phe	Pro	Tyr	Thr	Thr	Ile	Leu	Ser	Ile	Trp	Leu	Ala	Thr	Arg	Arg	
				140					145					150	
Val	His	Pro	Ala	Leu	Asp	Thr	Tyr	Ile	Lys	Glu	Arg	Lys	Leu	Cys	
				155					160					165	
Ala	Tyr	Pro	Arg	Leu	Glu	Ile	Tyr	Gln	Glu	Asp	Gln	Ile	His	Phe	
				170					175					180	
Met	Cys	Pro	Leu	Ala	Arg	Gln	Gly	Asp	Phe	Tyr	Val	Pro	Glu	Met	
				185					190					195	
Lys	Glu	Thr	Glu	Trp	Lys	Trp	Arg	Gly	Leu	Val	Glu	Ala	Ile	Asp	
				200					205					210	
Thr	Gln	Val	Asp	Gly	Thr	Gly	Ala	Asp	Thr	Met	Ser	Asp	Thr	Ser	
				215					220					225	
Ser	Val	Ser	Leu	Glu	Val	Ser	Pro	Gly	Ser	Arg	Glu	Thr	Ser	Ala	
				230					235					240	
Ala	Thr	Leu	Ser	Pro	Gly	Ala	Ser	Ser	Arg	Gly	Trp	Asp	Asp	Gly	
				245					250					255	
Asp	Thr	Arg	Ser	Glu	His	Ser	Tyr	Ser	Glu	Ser	Gly	Ala	Ser	Gly	
				260					265					270	
Ser	Ser	Phe	Glu	Glu	Leu	Asp	Leu	Glu	Gly	Glu	Gly	Pro	Leu	Gly	
				275					280					285	
Glu	Ser	Arg	Leu	Asp	Pro	Gly	Thr	Glu	Pro	Leu	Gly	Thr	Thr	Lys	
				290					295					300	
Trp	Leu	Trp	Glu	Pro	Thr	Ala	Pro	Glu	Lys	Gly	Lys	Glu			
				305					310						

<210> 98
 <211> 725
 <212> DNA
 <213> Homo sapiens

<400> 98
 ccgcgggaac gctgtcctgg ctgccgccac ccgaacagcc tgtcctggtg 50
 ccccggtcc ctgccccgcg ccagtcattg accctgcgcc cctcactcct 100
 cccgtccat ctgtgtctgc tgtgtgtgt cagtgcggcg gtgtgccggg 150
 ctgaggtctg gctcgaaacc gaaagtcccg tccggaccct ccaagtggag 200
 accctggtgg agccccaga accatgtgcc gagcccgctg cttttggaga 250

cacgcttcac atacactaca cggaagctt ggtagatgga cgtattattg 300
acacctccct gaccagagac cctctggta tagaacttgg ccaaaagcag 350
gtgattccag gtctggagca gagtcttctc gacatgtgtg tgggagagaa 400
gcgaagggca atcattcctt ctcaacttggc ctatggaaaa cggggatttc 450
caccatctgt cccagcggat gcagtgggtgc agtatgacgt ggagctgatt 500
gcactaatcc gagccaacta ctggctaaaag ctggtgaagg gcattttgcc 550
tctggtaggg atggccatgg tgccagccct cctgggcctc attgggtatc 600
acctatacag aaaggccaat agacccaaag tctccaaaaa gaagctcaag 650
gaagagaaaac gaaacaagag caaaaagaaa taataaataa taaattttaa 700
aaaacttaaa aaaaaaaaaa aaaaa 725

<210> 99

<211> 201

<212> PRT

<213> Homo sapiens

<400> 99

Met	Thr	Leu	Arg	Pro	Ser	Leu	Leu	Pro	Leu	His	Leu	Leu	Leu	Leu	1	5	10	15
Leu	Leu	Leu	Ser	Ala	Ala	Val	Cys	Arg	Ala	Glu	Ala	Gly	Leu	Glu	20	25	30	
Thr	Glu	Ser	Pro	Val	Arg	Thr	Leu	Gln	Val	Glu	Thr	Leu	Val	Glu	35	40	45	
Pro	Pro	Glu	Pro	Cys	Ala	Glu	Pro	Ala	Ala	Phe	Gly	Asp	Thr	Leu	50	55	60	
His	Ile	His	Tyr	Thr	Gly	Ser	Leu	Val	Asp	Gly	Arg	Ile	Ile	Asp	65	70	75	
Thr	Ser	Leu	Thr	Arg	Asp	Pro	Leu	Val	Ile	Glu	Leu	Gly	Gln	Lys	80	85	90	
Gln	Val	Ile	Pro	Gly	Leu	Glu	Gln	Ser	Leu	Leu	Asp	Met	Cys	Val	95	100	105	
Gly	Glu	Lys	Arg	Arg	Ala	Ile	Ile	Pro	Ser	His	Leu	Ala	Tyr	Gly	110	115	120	
Lys	Arg	Gly	Phe	Pro	Pro	Ser	Val	Pro	Ala	Asp	Ala	Val	Val	Gln	125	130	135	
Tyr	Asp	Val	Glu	Leu	Ile	Ala	Leu	Ile	Arg	Ala	Asn	Tyr	Trp	Leu	140	145	150	
Lys	Leu	Val	Lys	Gly	Ile	Leu	Pro	Leu	Val	Gly	Met	Ala	Met	Val	155	160	165	
Pro	Ala	Leu	Leu	Gly	Leu	Ile	Gly	Tyr	His	Leu	Tyr	Arg	Lys	Ala	170	175	180	
Asn	Arg	Pro	Lys	Val	Ser	Lys	Lys	Lys	Leu	Lys	Glu	Glu	Lys	Arg				

Asn Lys Ser Lys Lys Lys
200

<210> 100
<211> 705
<212> DNA
<213> Homo sapiens

<400> 100
cccgggaacg tgttcctggc tgccgcaccc gaacagcctg tcctggtgcc 50
ccggctccct gccccgcgcc cagtcatgac cctgcgcccc tcactcctcc 100
cgctccatct gctgctgctg ctgctgctca gtgcggcggt gtgccgggct 150
gaggctgggc tcgaaaccga aagtcctgct cggaccctcc aagtggagac 200
cctggtggag cccccagaac catgtgccga gcccgtgct tttggagaca 250
cgcttcacat aactacacg ggaagcttgg tagatggacg tattattgac 300
acctccctga ccagagaccc tctggttata gaacttggcc aaaagcaggt 350
gattccaggt ctggagcaga gtcttctoga catgtgtgtg ggagagaagc 400
gaagggcaat cattccttct cacttggcct atggaaaacg gggatttcca 450
ccatctgtcc cagcggatgc agtgggtgcag tatgacgtgg agctgattgc 500
actaatccga gccaaactact ggctaaagct ggtgaagggc attttgcctc 550
tggtagggat ggccatggtg ccaccctcct gggcctcatt gggatatcac 600
tatacagaaa ggccaataga cccaaagtct ccaaaaagaa gctcaaggaa 650
gagaaacgaa acaagagcaa aaagaaataa taaataataa attttaaaaa 700
actta 705

<210> 101
<211> 543
<212> DNA
<213> Homo sapiens

<400> 101
ccgaaagtcc cgtccggacc ctccaagtgg agaccctggt ggagccccc 50
gaaccatgtg ccgagcccg cgtttttgga gacacgcttc acatacacta 100
cacgggaagc ttggtagatg gacgtattat tgacacctcc ctgaccagag 150
accctctggt tatagaactt ggccaaaagc aggtgattcc aggtctggag 200
cagagtcttc tcgacatgtg tgtgggagag aagcgaaggg caatcattcc 250
ttctcacttg gcctatggaa aacggggatt tccaccatct gtcccagcgg 300
atgcagtggg gcagtatgac gtggagctga ttgcactaat ccgagccaac 350
tactggctaa agctggtgaa gggcattttg cctctggtag ggatggccat 400

ggtgccagcc ctcttgggcc tcattgggta tcacctatac agaaaggcca 450
 atagacccaa agtctccaaa aagaagctca aggaagagaa acgaaacaag 500
 agcaaaaaga aataataaat aataaatttt aaaaaactta aaa 543

<210> 102

<211> 1316

<212> DNA

<213> Homo sapiens

<400> 102

ctgctgcatc cgggtgtctg gaggtgtggt ccgttttgggtt ttcttggcta 50
 aaatcggggg agtgaggcgg gccggcgcggt cgcgacaccg ggctccggaa 100
 ccactgcacg acggggctgg actgacctga aaaaaatgtc tggatttcta 150
 gagggcttga gatgctcaga atgcattgac tgggggggaaa agcgcaatac 200
 tattgcttcc attgctgctg gtgtactatt ttttacaggc tgggtggatta 250
 tcatagatgc agctgttatt tatcccacca tgaaagattt caaccactca 300
 taccatgcct gtggtgttat agcaaccata gccttcctaa tgattaatgc 350
 agtatcgaat ggacaagtcc gaggtgatag ttacagtga ggttgtctgg 400
 gtcaaacagg tgctcgcatc ttgcttttctg ttggtttcat gttggccttt 450
 ggatctctga ttgcatctat gtggattcctt tttggagggtt atgttgctaa 500
 agaaaaagac atagtatacc ctggaattgc tgtatttttc cagaatgcct 550
 tcactctttt tggagggtcg gtttttaagt ttggccgcac tgaagactta 600
 tggcagtga cacaatctgat tcccacagc acaacagccc tgcattgggtt 650
 tgtttgtttt ttactgctc actcccaacc ttttgtaatg ccattttcta 700
 aacttatctt tgagtgtagt ctacagctta agttgtgtaa tactaaaatc 750
 acgagaacac ctaaacaaca accaaaaatc tattgtggta tgcacttgat 800
 taacttataa aatgttagag gaaactttca catgaataat ttttgtcaaa 850
 ttttatcatg gtataatttg taaaaataaa aagaatttac aaaagaaatt 900
 atggatttgt caatgtaagt atttgtcata tctgagggtc aaaaccacaa 950
 tgaaagtgtc ctgaagattt aatgtgttta ttcaaattgt gtctcttctg 1000
 tgtcaaatgt taaatgaaat ataaacattt tttagttttt aaaatattcc 1050
 gtggtcaaaa ttcttcctca ctataattgg tatttacttt taccaaaaat 1100
 tctgtgaaca tgtaattgaa ctggcttttg aggggtctccc aaggggtgag 1150
 tggacgtgtt ggaagagaga agcaccatgg tccagccacc aggtccctg 1200
 tgtcccttcc atgggaaggt ctccgctgt gcctctcatt ccaagggcag 1250
 gaagatgtga ctacagccatg acaogtgggt ctggtgggat gcacagtcac 1300

tccacatcca ccactg 1316

<210> 103

<211> 157

<212> PRT

<213> Homo sapiens

<400> 103

Met	Ser	Gly	Phe	Leu	Glu	Gly	Leu	Arg	Cys	Ser	Glu	Cys	Ile	Asp
1				5					10					15
Trp	Gly	Glu	Lys	Arg	Asn	Thr	Ile	Ala	Ser	Ile	Ala	Ala	Gly	Val
				20					25					30
Leu	Phe	Phe	Thr	Gly	Trp	Trp	Ile	Ile	Ile	Asp	Ala	Ala	Val	Ile
				35					40					45
Tyr	Pro	Thr	Met	Lys	Asp	Phe	Asn	His	Ser	Tyr	His	Ala	Cys	Gly
				50					55					60
Val	Ile	Ala	Thr	Ile	Ala	Phe	Leu	Met	Ile	Asn	Ala	Val	Ser	Asn
				65					70					75
Gly	Gln	Val	Arg	Gly	Asp	Ser	Tyr	Ser	Glu	Gly	Cys	Leu	Gly	Gln
				80					85					90
Thr	Gly	Ala	Arg	Ile	Trp	Leu	Phe	Val	Gly	Phe	Met	Leu	Ala	Phe
				95					100					105
Gly	Ser	Leu	Ile	Ala	Ser	Met	Trp	Ile	Leu	Phe	Gly	Gly	Tyr	Val
				110					115					120
Ala	Lys	Glu	Lys	Asp	Ile	Val	Tyr	Pro	Gly	Ile	Ala	Val	Phe	Phe
				125					130					135
Gln	Asn	Ala	Phe	Ile	Phe	Phe	Gly	Gly	Leu	Val	Phe	Lys	Phe	Gly
				140					145					150
Arg	Thr	Glu	Asp	Leu	Trp	Gln								
				155										

<210> 104

<211> 545

<212> DNA

<213> Homo sapiens

<400> 104

ttcttggcta aaatcggggg agtgaggcgg gccggcgcg cgcgacaccg 50
ggctccggaa ccactgcacg acggggcttg actgacctga aaaaaatgtc 100
tggatttcta gagggcttga gatgctcaga atgcattgac tggggggaaa 150
agcgcaatac tattgcttcc attgctgctg gtgtactatt ttttacaggc 200
tggtggatta tcatagatgc agctgttatt tatcccacca tgaaagattt 250
caaccactca taccatgcct gtggtgttat agcaaccata gccttcctaa 300
tgattaatgc agtatcgaat ggacaagtcc gaggtgatag ttacagtga 350
ggttgtctgg gtcaaacagg tgctcgcatt tggttttctg ttggtttcat 400

gttggccttt ggatctctga ttgcatctat gtggattott tttggagggt 450
 atgttgctaa agaaaaagac atagtatacc ctggaattgc tgtatttttc 500
 cagaatgcct tcatcttttt tggagggctg gtttttaagt ttggc 545

<210> 105
 <211> 490
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 31, 39, 108, 145, 179, 219, 412, 479
 <223> unknown base

<400> 105
 tggacggacc tgaaaaaat gtttggattt ntagagggtg tgagatgttc 50
 agaatgcatg actgggggaa aagcgcaaact actattgctt ccattgctgc 100
 tgggtgtaata ttttttacag gctggtggat tatcatagat gcagntgtta 150
 tttatcccac catgaaagat ttcaaccant cataccatgc ctgtggtgtt 200
 atagcaacca tagccttcnt aatgattaat gcagtatcga atggacaagt 250
 ccgaggtgat agttacagtg aaggttggtt ggggtcaaaca ggtgctcgca 300
 tttggctttt cgttgggttc atgttggcct ttggatctct gattgcatct 350
 atgtggattc tttttggagg ttatgttgct aaagaaaaag acatagtata 400
 ccctggaatt gntgtatttt tccagaatgc cttcatcttt tttggagggc 450
 tggtttttaa gtttggccgc actgaagant tatggcagtg 490

<210> 106
 <211> 466
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 26, 38, 81, 115, 207, 329, 380, 446, 449
 <223> unknown base

<400> 106
 ggacaccggg ttccggacca atgcangacg ggggtggantg acctgaaaaa 50
 aatgtttgga ttttttagagg gcttgagatg ntcagaatgc attgactggg 100
 ggaaaagcgc aatantattg ctttccattg ctgctggtgt actatTTTTT 150
 acaggggtgg ggattatcat agatgcagct gttatttatc ccaccatgaa 200
 agatttnaac cactcatacc atgcctgtgg tgttatagca accatagcct 250
 tcctaataat taatgcagta tcgaatggac aagtcagagg tgatagttac 300
 agtgaagggt gtttgggtca aacaggtgnt cgcatttggc ttttcgttgg 350
 tttcatgttg gcctttggat ttctgattgn attctatgcg gattcttctt 400

ggaggttatg ttgctaaaga aaaagacata gtataccctg gaattnctnt 450
atccccccag aatgcc 466

<210> 107

<211> 377

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 52, 67, 70, 78, 105, 144, 150, 209, 266, 268, 282, 310, 331, 356

<223> unknown base

<400> 107

tagagggtctt gagatgctca gaatgcattg actggggggga aaagcgcaat 50

antattgctt ccattgntgn tgggtgnta tttttttaca ggctgggtgga 100

ttatnataga tgcagctgtt atttatccca ccatgaaaga tttnaaccan 150

tcataccatg cctgtggtgt tatagcaacc atagccttcc taatgattaa 200

tgcagtatng aatggacaag tccgagggtga tagttacagt gaagggttgtt 250

tgggtcaaac aggtgntngc atttggcttt tngttgggtt catgttggcc 300

tttgatctn tgattgcatt tatgtggatt ntttttggag gttatgttgc 350

taaagnaaaa gacatagtat accctgt 377

<210> 108

<211> 552

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 12, 25, 65, 130, 437, 537

<223> unknown base

<400> 108

gggaggctgt gnccgttttg ttttnttggc taaaatcggg ggagtgaggc 50

ggcccggcgc ggcngacac cgggttccgg gaaccattgc acgacggggg 100

ggactgacct gaaaaaatg tttggatttn tagagggtt gagatgctca 150

gaatgcattg actgggggga aaagcgcaat actattgctt ccattgctgc 200

tgggtgtacta ttttttacag gctggtggat tatcatagat gcagctgtta 250

tttatccac catgaaagat ttcaaccact cataccatgc ctgtggtgtt 300

atagcaacca tagccttctt aatgattaat gcagtatoga atggacaagt 350

ccgagggtgat agttacagtg aagggtgtct ggggtcaaaca ggtgctcgca 400

tttggctttt cgttggtttc atgttggtt ttggatntct gattgcatct 450

atgtggattc tttttggagg ttatgttgc aaagaaaaag acatagtata 500

ccctggaatt gctgtatttt tccagaatgc cttcatnttt tttggagggc 550

tg 552

<210> 109
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 109
gggtggatgg tactgctgca tcc 23

<210> 110
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 110
tgttgtgctg tgggaaatca gatgtg 26

<210> 111
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 111
gtgtctggag gctgtggccg tttgttttc ttgggctaaa atcggg 46

<210> 112
<211> 3004
<212> DNA
<213> Homo sapiens

<400> 112
cgacgccggc gtgatgtggc ttccgctggt gctgctcctg gctgtgctgc 50
tgctggccgt cctctgcaaa gtttacttgg gactattctc tggcagctcc 100
ccgaatcctt tctccgaaga tgtcaaacgg cccccagcgc ccctggtaac 150
tgacaaggag gccaggaaga aggttctcaa acaagctttt tcagccaacc 200
aagtgccgga gaagctggat gtggtggtaa ttggcagtgg ctttgggggc 250
ctggctgcag ctgcaattct agctaaagct ggcaagcgag tcctgggtgct 300
ggaacaacat accaaggcag ggggctgctg tcataccttt ggaaagaatg 350
gccttgaatt tgacacagga atccattaca ttgggcgtat ggaagagggc 400
agcattggcc gttttatctt ggaccagatc actgaagggc agctggactg 450
ggctcccctg tcctctcctt ttgacatcat ggtactggaa gggcccaatg 500
gccgaaagga gtaccccatg tacagtggag agaaagccta cattcagggc 550

ctcaaggaga agtttccaca ggaggaagct atcattgaca agtatataaa 600
 gctggttaag gtggtatcca gtggagcccc tcatgccatc ctgttgaaat 650
 tcctccatt gcccggtgtt cagctcctcg acaggtgtgg gctgctgact 700
 cgtttctctc cattccttca agcatocacc cagagcctgg ctgaggtcct 750
 gcagcagctg ggggcctcct ctgagctcca ggcagtactc agctacatct 800
 tccccactta cgggtgtcacc cccaaccaca gtgccttttc catgcacgcc 850
 ctgctggtca accactacat gaaaggagggc ttttatcccc gaggggggttc 900
 cagtgaatt gccttccaca ccatccctgt gattcagcgg gctgggggcg 950
 ctgtcctcac aaaggccact gtgcagagtgt tgttgctgga ctgagctggg 1000
 aaagcctgtg gtgtcagtgt gaagaagggg catgagctgg tgaacatcta 1050
 ttgccccatc gtggtctcca acgcaggact gttcaacacc tatgaacacc 1100
 tactgccggg gaacgcccgc tgcctgccag gtgtgaagca gcaactgggg 1150
 acggtgcggc cgggcttagg catgacctct gttttcatct gcctgcgagg 1200
 caccaaggaa gacctgcac tgcctccac caactactat gtttactatg 1250
 acacggacat ggaccaggcg atggagcgt acgtctccat gccagggaa 1300
 gaggtgcgg aacacatccc tcttctcttc ttgcctttcc catcagccaa 1350
 agatccgacc tgggaggacc gattcccagg ccggtccacc atgatcatgc 1400
 tcatacccac tgcctacgag tggtttgagg agtggcaggc ggagctgaag 1450
 ggaaagcggg gcagtgacta tgagaacctc aaaaactcct ttgtggaagc 1500
 ctctatgtca gtggtcctga aactgttccc acagctggag gggaaggtgg 1550
 agagtgtgac tgcaggatcc ccactacca accagttcta tctggtgct 1600
 ccccgaggtg cctgctacgg ggctgaccat gacctgggcc gcctgcaccc 1650
 ttgtgtgatg gcctccttga gggcccagag ccccatcccc aacctctatc 1700
 tgacaggcca ggatatcttc acctgtggac tggctggggc cctgcaaggt 1750
 gccctgctgt gcagcagcgc catcctgaag cggaacttgt actcagacct 1800
 taagaatctt gattctagga tccgggcaca gaagaaaaag aattagttcc 1850
 atcaggagg agtcagagga atttgcccc tggctggggc atctcccttg 1900
 acttaccat aatgtctttc tgcattagtt ccttgcacgt ataaagcact 1950
 ctaatttggg tctgatgcct gaagagaggc ctagtttaaa tcacaattcc 2000
 gaatctggg caatggaatc actgcttcca gctggggcag gtgagatctt 2050
 tacgcctttt ataacatgcc atccctaata ataggatatt gacttgata 2100
 gcttgatgtc tcatgacgag cggcgctctg catccctcac ccatgcctcc 2150

taactcagt atcaaagcga atattccatc tgtggataga acccctggca 2200
 gtgttgtcag ctcaacctgg tgggttcagt tctgtcctga ggcttctgct 2250
 ctcatcatt tagtgctacg ctgcacagtt ctacactgtc aagggaag 2300
 ggagactaat gaggcttaac tcaaaacctg ggogtggttt tggttgcat 2350
 tccatagggt tggagagctc tagatctctt ttgtgctggg ttcagtggct 2400
 cttcagggga caggaaatgc ctgtgtctgg ccagtgtggt tctggagctt 2450
 tggggtaaca gcaggatcca tcagttagta ggggtgatgt cagatgatca 2500
 tatccaattc atatggaagt cccgggtctg tcttccttat catcggggtg 2550
 gcagctggtt ctcaatgtgc cagcagggac tcagtaoctg agcctcaatc 2600
 aagccttatc caccaaatac acagggaagg gtgatgcagg gaagggtgac 2650
 atcaggagtc agggcatgga ctggtaagat gaatactttg ctgggctgaa 2700
 gcaggctgca gggcattcca gccaaaggga cagcagggga cagtgcaggg 2750
 aggtgtgggg taaggagggg aagtcacatc agaaaaggga aagccacgga 2800
 atgtgtgtga agcccagaaa tggcatttgc agttaattag cacatgtgag 2850
 ggtagacag gtaggtgaat gcaagctcaa ggtttgaaa aatgactttt 2900
 cagttatgtc tttggtatca gacatacgaa aggtctcttt gtagttcgtg 2950
 ttaatgtaac attaataaat ttattgattc cattgcttta aaaaaaaaaa 3000
 aaaa 3004

<210> 113
 <211> 610
 <212> PRT
 <213> Homo sapiens

<400> 113
 Met Trp Leu Pro Leu Val Leu Leu Leu Ala Val Leu Leu Leu Ala
 1 5 10 15
 Val Leu Cys Lys Val Tyr Leu Gly Leu Phe Ser Gly Ser Ser Pro
 20 25 30
 Asn Pro Phe Ser Glu Asp Val Lys Arg Pro Pro Ala Pro Leu Val
 35 40 45
 Thr Asp Lys Glu Ala Arg Lys Lys Val Leu Lys Gln Ala Phe Ser
 50 55 60
 Ala Asn Gln Val Pro Glu Lys Leu Asp Val Val Val Ile Gly Ser
 65 70 75
 Gly Phe Gly Gly Leu Ala Ala Ala Ala Ile Leu Ala Lys Ala Gly
 80 85 90
 Lys Arg Val Leu Val Leu Glu Gln His Thr Lys Ala Gly Gly Cys
 95 100 105

Cys	His	Thr	Phe	Gly	Lys	Asn	Gly	Leu	Glu	Phe	Asp	Thr	Gly	Ile	110	115	120
His	Tyr	Ile	Gly	Arg	Met	Glu	Glu	Gly	Ser	Ile	Gly	Arg	Phe	Ile	125	130	135
Leu	Asp	Gln	Ile	Thr	Glu	Gly	Gln	Leu	Asp	Trp	Ala	Pro	Leu	Ser	140	145	150
Ser	Pro	Phe	Asp	Ile	Met	Val	Leu	Glu	Gly	Pro	Asn	Gly	Arg	Lys	155	160	165
Glu	Tyr	Pro	Met	Tyr	Ser	Gly	Glu	Lys	Ala	Tyr	Ile	Gln	Gly	Leu	170	175	180
Lys	Glu	Lys	Phe	Pro	Gln	Glu	Glu	Ala	Ile	Ile	Asp	Lys	Tyr	Ile	185	190	195
Lys	Leu	Val	Lys	Val	Val	Ser	Ser	Gly	Ala	Pro	His	Ala	Ile	Leu	200	205	210
Leu	Lys	Phe	Leu	Pro	Leu	Pro	Val	Val	Gln	Leu	Leu	Asp	Arg	Cys	215	220	225
Gly	Leu	Leu	Thr	Arg	Phe	Ser	Pro	Phe	Leu	Gln	Ala	Ser	Thr	Gln	230	235	240
Ser	Leu	Ala	Glu	Val	Leu	Gln	Gln	Leu	Gly	Ala	Ser	Ser	Glu	Leu	245	250	255
Gln	Ala	Val	Leu	Ser	Tyr	Ile	Phe	Pro	Thr	Tyr	Gly	Val	Thr	Pro	260	265	270
Asn	His	Ser	Ala	Phe	Ser	Met	His	Ala	Leu	Leu	Val	Asn	His	Tyr	275	280	285
Met	Lys	Gly	Gly	Phe	Tyr	Pro	Arg	Gly	Gly	Ser	Ser	Glu	Ile	Ala	290	295	300
Phe	His	Thr	Ile	Pro	Val	Ile	Gln	Arg	Ala	Gly	Gly	Ala	Val	Leu	305	310	315
Thr	Lys	Ala	Thr	Val	Gln	Ser	Val	Leu	Leu	Asp	Ser	Ala	Gly	Lys	320	325	330
Ala	Cys	Gly	Val	Ser	Val	Lys	Lys	Gly	His	Glu	Leu	Val	Asn	Ile	335	340	345
Tyr	Cys	Pro	Ile	Val	Val	Ser	Asn	Ala	Gly	Leu	Phe	Asn	Thr	Tyr	350	355	360
Glu	His	Leu	Leu	Pro	Gly	Asn	Ala	Arg	Cys	Leu	Pro	Gly	Val	Lys	365	370	375
Gln	Gln	Leu	Gly	Thr	Val	Arg	Pro	Gly	Leu	Gly	Met	Thr	Ser	Val	380	385	390
Phe	Ile	Cys	Leu	Arg	Gly	Thr	Lys	Glu	Asp	Leu	His	Leu	Pro	Ser	395	400	405
Thr	Asn	Tyr	Tyr	Val	Tyr	Tyr	Asp	Thr	Asp	Met	Asp	Gln	Ala	Met	410	415	420

Glu Arg Tyr Val	Ser Met Pro Arg Glu	Glu Ala Ala Glu His Ile	425	430	435
Pro Leu Leu Phe	Phe Ala Phe Pro Ser	Ala Lys Asp Pro Thr Trp	440	445	450
Glu Asp Arg Phe	Pro Gly Arg Ser Thr	Met Ile Met Leu Ile Pro	455	460	465
Thr Ala Tyr Glu	Trp Phe Glu Glu Trp	Gln Ala Glu Leu Lys Gly	470	475	480
Lys Arg Gly Ser	Asp Tyr Glu Thr Phe	Lys Asn Ser Phe Val Glu	485	490	495
Ala Ser Met Ser	Val Val Leu Lys Leu	Phe Pro Gln Leu Glu Gly	500	505	510
Lys Val Glu Ser	Val Thr Ala Gly Ser	Pro Leu Thr Asn Gln Phe	515	520	525
Tyr Leu Ala Ala	Pro Arg Gly Ala Cys	Tyr Gly Ala Asp His Asp	530	535	540
Leu Gly Arg Leu	His Pro Cys Val Met	Ala Ser Leu Arg Ala Gln	545	550	555
Ser Pro Ile Pro	Asn Leu Tyr Leu Thr	Gly Gln Asp Ile Phe Thr	560	565	570
Cys Gly Leu Val	Gly Ala Leu Gln Gly	Ala Leu Leu Cys Ser Ser	575	580	585
Ala Ile Leu Lys	Arg Asn Leu Tyr Ser	Asp Leu Lys Asn Leu Asp	590	595	600
Ser Arg Ile Arg	Ala Gln Lys Lys Lys	Asn	605	610	

<210> 114
 <211> 1701
 <212> DNA
 <213> Homo sapiens

<400> 114
 gcagcggcga ggcggcggtg gtggctgagt ccgtggtggc agaggcgaag 50
 gcgacagctc taggggttgg caccggcccc gagaggagga tgcggttccg 100
 gatagggtg acgctgctgc tgtgtgcggt gctgctgagc ttggcctcgg 150
 cgtcctcgga tgaagaaggc agccaggatg aatccttaga ttccaagact 200
 actttgacat cagatgagtc agtaaaggac catactactg caggcagagt 250
 agttgctggt caaatatttc ttgattcaga agaattctgaa ttagaatcct 300
 ctattcaaga agaggaagac agcctcaaga gccaaagagg ggaaagtgtc 350
 acagaagata tcagctttct agagtctcca aatccagaaa acaaggacta 400
 tgaagagcca aagaaagtac ggaaaccagc ttgaccgcc attgaaggca 450

cagcacatgg ggagccctgc cacttccctt ttcttttcct agataaggag 500
tatgatgaat gtacatcaga tgggagggaa gatggcagac tgtggtgtgc 550
tacaacctat gactacaaag cagatgaaaa gtggggcctt tgtgaaactg 600
aagaagaggc tgctaagaga cggcagatgc aggaagcaga aatgatgtat 650
caactggaa tgaaaatcct taatggaagc aataagaaaa gccaaaaaag 700
agaagcatat cggtatctcc aaaaggcagc aagcatgaac cataccaaag 750
ccctggagag agtgtcatat gctcttttat ttggtgatta cttgccacag 800
aatatccagg cagcgagaga gatgtttgag aagctgactg aggaaggctc 850
tcccaaggga cagactgctc ttggccttct gtatgcctct ggacttggtg 900
ttaattcaag tcaggcaaag gctcttgtat attatacatt tggagctctt 950
gggggcaatc taatagccca catggttttg gtaagtagac tttagtggaa 1000
ggctaataat attaacatca gaagaatttg tggtttatag cggccacaac 1050
tttttcagct ttcatgatcc agatttgctt gtattaagac caaatattca 1100
gttgaacttc cttcaaattc ttgttaatgg atataacaca tggaatctac 1150
atgtaaatga aagttggtgg agtcacaaat ttttctttaa aatgattagt 1200
ttggctgatt gcccctaaaa agagagatct gataaatggc tctttttaaa 1250
ttttctctga gttggaattg tcagaatcat tttttacatt agattatcat 1300
aattttaaaa atttttcttt agtttttcaa aattttgtaa atggtggcta 1350
tagaaaaaca acatgaaata ttatacaata ttttgcaaca atgccctaag 1400
aattgttaaa attcatggag ttatttgtgc agaagactc cagagagctc 1450
tactttctgt tttttacttt tcatgattgg ctgtcttccc atttattctg 1500
gtcattttatt gctagtgaca ctgtgcctgc ttccagtagt ctcatTTTTCC 1550
ctattttgct aatttggtac tttttctttg ctaatttgga agattaactc 1600
atttttaata aaattatgtc taagattaaa aaaaaaaaaa aaaaaaaaaa 1650
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1700

a 1701

<210> 115
<211> 301
<212> PRT
<213> Homo sapiens

<400> 115
Met Arg Val Arg Ile Gly Leu Thr Leu Leu Leu Cys Ala Val Leu
1 5 10 15
Leu Ser Leu Ala Ser Ala Ser Ser Asp Glu Glu Gly Ser Gln Asp
20 25 30

Glu	Ser	Leu	Asp	Ser	Lys	Thr	Thr	Leu	Thr	Ser	Asp	Glu	Ser	Val	35	40	45
Lys	Asp	His	Thr	Thr	Ala	Gly	Arg	Val	Val	Ala	Gly	Gln	Ile	Phe	50	55	60
Leu	Asp	Ser	Glu	Glu	Ser	Glu	Leu	Glu	Ser	Ser	Ile	Gln	Glu	Glu	65	70	75
Glu	Asp	Ser	Leu	Lys	Ser	Gln	Glu	Gly	Glu	Ser	Val	Thr	Glu	Asp	80	85	90
Ile	Ser	Phe	Leu	Glu	Ser	Pro	Asn	Pro	Glu	Asn	Lys	Asp	Tyr	Glu	95	100	105
Glu	Pro	Lys	Lys	Val	Arg	Lys	Pro	Ala	Leu	Thr	Ala	Ile	Glu	Gly	110	115	120
Thr	Ala	His	Gly	Glu	Pro	Cys	His	Phe	Pro	Phe	Leu	Phe	Leu	Asp	125	130	135
Lys	Glu	Tyr	Asp	Glu	Cys	Thr	Ser	Asp	Gly	Arg	Glu	Asp	Gly	Arg	140	145	150
Leu	Trp	Cys	Ala	Thr	Thr	Tyr	Asp	Tyr	Lys	Ala	Asp	Glu	Lys	Trp	155	160	165
Gly	Phe	Cys	Glu	Thr	Glu	Glu	Glu	Ala	Ala	Lys	Arg	Arg	Gln	Met	170	175	180
Gln	Glu	Ala	Glu	Met	Met	Tyr	Gln	Thr	Gly	Met	Lys	Ile	Leu	Asn	185	190	195
Gly	Ser	Asn	Lys	Lys	Ser	Gln	Lys	Arg	Glu	Ala	Tyr	Arg	Tyr	Leu	200	205	210
Gln	Lys	Ala	Ala	Ser	Met	Asn	His	Thr	Lys	Ala	Leu	Glu	Arg	Val	215	220	225
Ser	Tyr	Ala	Leu	Leu	Phe	Gly	Asp	Tyr	Leu	Pro	Gln	Asn	Ile	Gln	230	235	240
Ala	Ala	Arg	Glu	Met	Phe	Glu	Lys	Leu	Thr	Glu	Glu	Gly	Ser	Pro	245	250	255
Lys	Gly	Gln	Thr	Ala	Leu	Gly	Phe	Leu	Tyr	Ala	Ser	Gly	Leu	Gly	260	265	270
Val	Asn	Ser	Ser	Gln	Ala	Lys	Ala	Leu	Val	Tyr	Tyr	Thr	Phe	Gly	275	280	285
Ala	Leu	Gly	Gly	Asn	Leu	Ile	Ala	His	Met	Val	Leu	Val	Ser	Arg	290	295	300

Leu

<210> 116
 <211> 584
 <212> DNA
 <213> Homo sapiens
 <400> 116

cttcccagcc ctgtgcccc aagcacctgg agcatatagc cttgcagaac 50
 ttctacttgc ctgcctccct gcctctggcc atggcctgcc ggtgcctcag 100
 cttccttctg atggggacct tcctgtcagt ttcccagaca gtccctggccc 150
 agctggatgc actgctggtc ttcccaggcc aagtggctca actctcctgc 200
 acgctcagcc cccagcacgt caccatcagg gactacgggtg tgtcctggta 250
 ccagcagcgg gcaggcagtg ccctcgata tctcctctac taccgctcgg 300
 aggaggatca ccaccggcct gctgacatcc ccgatcgatt ctccggcagcc 350
 aaggatgagg cccacaatgc ctgtgtcctc accattagtc ccgtgcagcc 400
 tgaagacgac gcggattact actgctctgt tggctacggc tttagtcctt 450
 aggggtgggg tgtgagatgg gtgcctcccc tctgcctccc atttctgccc 500
 ctgaccttgg gtccctttta aactttctct gagccttget tcccctctgt 550
 aaaatgggtt aataatattc aacatgtcaa caac 584

<210> 117
 <211> 123
 <212> PRT
 <213> Homo sapiens

<400> 117
 Met Ala Cys Arg Cys Leu Ser Phe Leu Leu Met Gly Thr Phe Leu
 1 5 10 15
 Ser Val Ser Gln Thr Val Leu Ala Gln Leu Asp Ala Leu Leu Val
 20 25 30
 Phe Pro Gly Gln Val Ala Gln Leu Ser Cys Thr Leu Ser Pro Gln
 35 40 45
 His Val Thr Ile Arg Asp Tyr Gly Val Ser Trp Tyr Gln Gln Arg
 50 55 60
 Ala Gly Ser Ala Pro Arg Tyr Leu Leu Tyr Tyr Arg Ser Glu Glu
 65 70 75
 Asp His His Arg Pro Ala Asp Ile Pro Asp Arg Phe Ser Ala Ala
 80 85 90
 Lys Asp Glu Ala His Asn Ala Cys Val Leu Thr Ile Ser Pro Val
 95 100 105
 Gln Pro Glu Asp Asp Ala Asp Tyr Tyr Cys Ser Val Gly Tyr Gly
 110 115 120
 Phe Ser Pro

<210> 118
 <211> 3402
 <212> DNA
 <213> Homo sapiens

<400> 118

gccgccccgc cccgagaccg ggccccgggg cgcgggggcg cgggatgcgg 50
 cgccccggggc ggcgatgacc gcgagagcga cgccgcgggc ccggccctga 100
 ccccgccgcc cgcccgtga gccccccgcc gaggtccgga caggccgaga 150
 tgacgcgag cccctgttg ctgctcctgc tgccgccgt gctgctgggg 200
 gccttccac cgccgcgcgc cgccgaggc ccccaaaga tggcgacaa 250
 ggtggtccca cggcaggtgg ccgggtggg ccgactgtg cggctgcagt 300
 gccagtgga gggggacccg ccgcgcgtga ccatgtggac caaggatggc 350
 cgcaccatcc acagcggctg gagccgttc cgcgtgctgc cgcaggggct 400
 gaaggtgaag caggtggagc gggaggatgc cggcgtgtac gtgtgcaagg 450
 ccaccaacgg cttcggcagc ctgagcgtca actacaccct cgtcgtgctg 500
 gatgacatta gccagggaa ggagagcctg gggcccgaca gtcctcttg 550
 gggtaagag gaccccgcca gccagcagtg ggcacgaccg cgcttcacac 600
 agccctcaa gatgaggcgc cgggtgatcg cacggcccg gggtagctcc 650
 gtgcggctca agtgcgtggc cagcgggcac cctcggcccg acatcacgtg 700
 gatgaaggac gaccaggcct tgacgcgccc agaggccgt gagccagga 750
 agaagaagtg gacactgagc ctgaagaacc tgcggccgga ggacagcggc 800
 aaatacacct gccgcgtgtc gaaccgcgcg ggcgccatca acgccaccta 850
 caaggtgat gtgatccagc ggaccggtc caagccgtg ctacaggca 900
 cgcaccccggt gaacacgacg gtggacttcg gggggaccac gtccttcag 950
 tgcaaggtgc gcagcgacgt gaagccggtg atccagtggc tgaagcgcgt 1000
 ggagtacggc gccgagggcc gccacaactc caccatcgat gtgggcggcc 1050
 agaagtttgt ggtgctgccc acgggtgacg tgtggtcgcg gcccgacggc 1100
 tcctacctca ataagctgct catcacccgt gcccgccagg acgatgcggg 1150
 catgtacatc tgccttggcg ccaacaccat gggctacagc ttccgcagcg 1200
 cttcctcac cgtgctgcca gacccaaaac cgccagggcc acctgtggcc 1250
 tcctcgtcct cggccactag cctgcggtgg ccggtggtca tcggcatccc 1300
 agccggcgct gtcttcatcc tgggcacct gtcctgttg ctttgccagg 1350
 cccagaagaa gccgtgcacc ccgcgcctg cccctcccct gcctgggcac 1400
 cgccgcgcg ggacggcccg cgaccgcagc ggagacaagg acctccctc 1450
 gttggccgcc ctacgcgtg gccctggtgt ggggctgtgt gaggagcatg 1500
 ggtctccggc agccccccag caettaactg gccagggcc agttgctggc 1550
 cctaagttgt accccaaact ctacacagac atccacacac acacacacac 1600

acactctcac acacactcac acgtggaggg caaggtccac cagcacatcc 1650
 actatcagtg ctagacggca ccgtatctgc agtgggcacg ggggggcccgg 1700
 ccagacaggc agactgggag gatggaggac ggagctgcag acgaaggcag 1750
 gggacccatg gcgaggagga atggccagca cccaggcag tctgtgtgtg 1800
 aggcatagcc cctggacaca cacacacaga cacacacact acctggatgc 1850
 atgtatgcac acacatgcgc gcacacgtgc tccctgaagg cacacgtacg 1900
 cacacgcaca tgcacagata tgccgcctgg gcacacagat aagctgcca 1950
 aatgcacgca cagcacaga gacatgccag aacatacaag gacatgctgc 2000
 ctgaacatac acacgcacac ccatgcgcag atgtgctgcc tggacacaca 2050
 cacacacacg gatatgctgt ctggacgcac acacgtgcag atatggtatc 2100
 cggacacaca cgtgcacaga tatgctgcct ggacacacag ataatgctgc 2150
 cttgacacac acatgcaagg atattgcctg gacacacaca cacacacacg 2200
 cgtgcacaga tatgctgtct ggacacgcac acacatgcag atatgctgcc 2250
 tggacacaca cttccagaca cacgtgcaca ggcgcagata tgctgcctgg 2300
 acacacgcag atatgctgtc tagtcacaca cacacgcaga catgctgtcc 2350
 ggacacacac acgcatgcac agatatgctg tccggacaca cacacgcacg 2400
 cagatatgct gcctggacac acacacagat aatgctgcct caacactcac 2450
 acacgtgcag atattgcctg gacacacaca tgtgcacaga tatgctgtct 2500
 ggacatgcac acacgtgcag atatgctgtc cggatacaca cgcacgcaca 2550
 catgcagata tgctgcctgg gcacacactt ccggacacac atgcacacac 2600
 aggtgcagat atgctgcctg gacacacaca cagataatgc tgctcaaca 2650
 ctcacacacg tgcagatatt gcctggacac acacatgtgc acagatatgc 2700
 tgtctggaca tgcacacacg tgcagatatg ctgtccggat acacacgcac 2750
 gcacacatgc agatatgctg cctgggcaca cacttcogga cacacatgca 2800
 cacacaggtg cagatatgct gcctggacac acgcagactg acgtgctttt 2850
 gggaggggtg gccgtgaagc ctgcagtacg tgtgcogtga ggctcatagt 2900
 tgatgaggga ctttcctgc tccaccgtca ccccccaac tctgcccgc 2950
 tctgtccccg cctcagtcct cgcctccatc cccgcctctg tcccctggcc 3000
 ttggcggcta tttttgccac ctgccttggg tgcccaggag tcccctactg 3050
 ctgtgggctg gggttggggg cacagcagcc ccaagcctga gaggctggag 3100
 cccatggcta gtggtcatc cccagtgcac tctccccctg acacagagaa 3150
 ggggccttgg tattttatatt taagaaatga agataatatt aataatgatg 3200

gaaggaagac tgggttgacg ggactgtggt ctctcctggg gcccgggacc 3250
 cgcctgggtct ttcagccatg ctgatgacca caccctgtcc aggccagaca 3300
 ccacccccca ccccaactgtc gtggtggccc cagatctctg taattttatg 3350
 tagagtttga gctgaagccc cgtatatatta atttattttg ttaaacacaa 3400
 aa 3402

<210> 119
 <211> 504
 <212> PRT
 <213> Homo sapiens

<400> 119
 Met Thr Pro Ser Pro Leu Leu Leu Leu Leu Leu Pro Pro Leu Leu
 1 5 10 15
 Leu Gly Ala Phe Pro Pro Ala Ala Ala Ala Arg Gly Pro Pro Lys
 20 25 30
 Met Ala Asp Lys Val Val Pro Arg Gln Val Ala Arg Leu Gly Arg
 35 40 45
 Thr Val Arg Leu Gln Cys Pro Val Glu Gly Asp Pro Pro Pro Leu
 50 55 60
 Thr Met Trp Thr Lys Asp Gly Arg Thr Ile His Ser Gly Trp Ser
 65 70 75
 Arg Phe Arg Val Leu Pro Gln Gly Leu Lys Val Lys Gln Val Glu
 80 85 90
 Arg Glu Asp Ala Gly Val Tyr Val Cys Lys Ala Thr Asn Gly Phe
 95 100 105
 Gly Ser Leu Ser Val Asn Tyr Thr Leu Val Val Leu Asp Asp Ile
 110 115 120
 Ser Pro Gly Lys Glu Ser Leu Gly Pro Asp Ser Ser Ser Gly Gly
 125 130 135
 Gln Glu Asp Pro Ala Ser Gln Gln Trp Ala Arg Pro Arg Phe Thr
 140 145 150
 Gln Pro Ser Lys Met Arg Arg Arg Val Ile Ala Arg Pro Val Gly
 155 160 165
 Ser Ser Val Arg Leu Lys Cys Val Ala Ser Gly His Pro Arg Pro
 170 175 180
 Asp Ile Thr Trp Met Lys Asp Asp Gln Ala Leu Thr Arg Pro Glu
 185 190 195
 Ala Ala Glu Pro Arg Lys Lys Lys Trp Thr Leu Ser Leu Lys Asn
 200 205 210
 Leu Arg Pro Glu Asp Ser Gly Lys Tyr Thr Cys Arg Val Ser Asn
 215 220 225
 Arg Ala Gly Ala Ile Asn Ala Thr Tyr Lys Val Asp Val Ile Gln
 230 235 240

Arg	Thr	Arg	Ser	Lys	Pro	Val	Leu	Thr	Gly	Thr	His	Pro	Val	Asn	
				245					250					255	
Thr	Thr	Val	Asp	Phe	Gly	Gly	Thr	Thr	Ser	Phe	Gln	Cys	Lys	Val	
				260					265					270	
Arg	Ser	Asp	Val	Lys	Pro	Val	Ile	Gln	Trp	Leu	Lys	Arg	Val	Glu	
				275					280					285	
Tyr	Gly	Ala	Glu	Gly	Arg	His	Asn	Ser	Thr	Ile	Asp	Val	Gly	Gly	
				290					295					300	
Gln	Lys	Phe	Val	Val	Leu	Pro	Thr	Gly	Asp	Val	Trp	Ser	Arg	Pro	
				305					310					315	
Asp	Gly	Ser	Tyr	Leu	Asn	Lys	Leu	Leu	Ile	Thr	Arg	Ala	Arg	Gln	
				320					325					330	
Asp	Asp	Ala	Gly	Met	Tyr	Ile	Cys	Leu	Gly	Ala	Asn	Thr	Met	Gly	
				335					340					345	
Tyr	Ser	Phe	Arg	Ser	Ala	Phe	Leu	Thr	Val	Leu	Pro	Asp	Pro	Lys	
				350					355					360	
Pro	Pro	Gly	Pro	Pro	Val	Ala	Ser	Ser	Ser	Ser	Ala	Thr	Ser	Leu	
				365					370					375	
Pro	Trp	Pro	Val	Val	Ile	Gly	Ile	Pro	Ala	Gly	Ala	Val	Phe	Ile	
				380					385					390	
Leu	Gly	Thr	Leu	Leu	Leu	Trp	Leu	Cys	Gln	Ala	Gln	Lys	Lys	Pro	
				395					400					405	
Cys	Thr	Pro	Ala	Pro	Ala	Pro	Pro	Leu	Pro	Gly	His	Arg	Pro	Pro	
				410					415					420	
Gly	Thr	Ala	Arg	Asp	Arg	Ser	Gly	Asp	Lys	Asp	Leu	Pro	Ser	Leu	
				425					430					435	
Ala	Ala	Leu	Ser	Ala	Gly	Pro	Gly	Val	Gly	Leu	Cys	Glu	Glu	His	
				440					445					450	
Gly	Ser	Pro	Ala	Ala	Pro	Gln	His	Leu	Leu	Gly	Pro	Gly	Pro	Val	
				455					460					465	
Ala	Gly	Pro	Lys	Leu	Tyr	Pro	Lys	Leu	Tyr	Thr	Asp	Ile	His	Thr	
				470					475					480	
His	Thr	His	Thr	His	Ser	His	Thr	His	Ser	His	Val	Glu	Gly	Lys	
				485					490					495	
Val	His	Gln	His	Ile	His	Tyr	Gln	Cys							
				500											

<210> 120

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 120

cgagatgacg ccgagccccc 20

<210> 121

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 121

cggttcgaca cgcggcaggt g 21

<210> 122

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 122

tgctgctcct gctgccgccg ctgctgctgg gggccttccc gccgg 45

<210> 123

<211> 4420

<212> DNA

<213> Homo sapiens

<400> 123

cccagctgag gagccctgct caagacacgg tcaactggatc tgagaaactt 50
cccaggggac cgcattccag agtcagtgac tctgtgaagc acccacatct 100
acctcttgcc acgttcccac gggcttgggg gaaagatggg ggggaccaag 150
gcctgggtgt tctccttcct ggtcctggaa gtcacatctg tgttggggag 200
acagacgatg ctcacccagt cagtaagaag agtccagcct gggaagaaga 250
acccagcat ctttgccaag cctgccgaca ccctggagag ccctggtgag 300
tggacaacat gggtcaacat cgactaccca ggcggaagg gcgactatga 350
gcggctggac gccattcgct tctactatgg ggaccgtgta tgtgcccgtc 400
ccctgcggct agaggctcgg accactgact ggacacctgc gggcagcact 450
ggccaggtgg tccatggtag tcccctgtag ggtttctggt gcctcaacag 500
ggagcagcgg cctggccaga actgctctaa ttacaccgta cgcttcctct 550
gcccaccagg atccctgcgc cgagacacag agcgcatctg gagcccatgg 600
tctccctgga gcaagtgtc agctgcctgt ggtcagactg gggccagac 650
tcgcacacgc atttgcttgg cagagatggg gtcgctgtgc agtgaggcca 700
gcgaagaggg tcagcactgc atgggccagg actgtacagc ctgtgacctg 750
acctgccc aa tgggccaggt gaatgctgac tgtgatgcct gcatgtgcca 800
ggacttcatg cttcatgggg ctgtctccct tcccggaggt gcccagcct 850

caggggctgc tatctacctc ctgaccaaga cgccgaagct gctgacccag 900
acagacagtg atgggagatt ccgaatccct ggcttgtgcc ctgatggcaa 950
aagcatcctg aagatcacia aggtcaagtt tgccccatt gtactcacia 1000
tgcccaagac tagcctgaag gcagccacca tcaaggcaga gtttgtgagg 1050
gcagagactc catacatggt gatgaaccct gagacaaaag cacggagagc 1100
tgggcagagc gtgtctctgt gctgtaaggc cacagggaag cccaggccag 1150
acaagtatth ttggtatcat aatgacacat tgctggatcc ttccctctac 1200
aagcatgaga gcaagctggt gctgaggaaa ctgcagcagc accaggctgg 1250
ggagtactth tgcaaggccc agagtgatgc tggggctgtg aagtccaagg 1300
ttgccagct gattgtcaca gcatctgatg agactccttg caaccagtt 1350
cctgagagct atcttatccg gctgccccat gattgctttc agaatgccac 1400
caactccttc tactatgacg tgggacgctg cctgtttaag acttgtgcag 1450
ggcagcagga taatgggatc aggtgccgtg atgctgtgca gaactgctgt 1500
ggcatctcca agacagagga aaggagatc cagtgcagtg gctacacgct 1550
accaccaag gtggccaagg agtgcagctg ccagcgggtg acggaaactc 1600
ggagcatcgt gcggggccgt gtcagtgtgt ctgacaatgg ggagcccatg 1650
cgctttggcc atgtgtacat ggggaacagc cgtgtaagca tgactggcta 1700
caagggcact ttcacctcc atgtcccca ggacactgag aggtggtgc 1750
tcacatttgt ggacaggctg cagaagtttg tcaacaccac caaagtgcta 1800
cctttcaaca agaaggggag tgccgtgttc catgaaatca agatgcttcg 1850
tcggaaagag cccatcactt tggaagccat ggagaccaac atcatcccc 1900
tgggggaagt ggttggtgaa gaccccatgg ctgaactgga gattccatcc 1950
aggagtthct acaggcagaa tggggagccc tacataggaa aagtgaaggc 2000
cagtgtgacc ttctggatc cccggaatat ttccacagcc acagctgccc 2050
agactgacct gaacttcac aatgacgaag gagacactth ccccttcgg 2100
acgtatggca tgttctctgt ggacttcaga gatgaggta cctcagagcc 2150
acttaatgct ggcaaagtga aggtccacct tgactcgacc caggtcaaga 2200
tgccagagca catatccaca gtgaaactct ggtcactcaa tccagacaca 2250
gggctgtggg aggaggaagg tgatttcaaa tttgaaaatc aaaggaggaa 2300
caaaagagaa gacagaacct tcttgggtgg caacctggag attcgtgaga 2350
ggaggctctt taacctggat gttctgaaa gcaggcgggtg ctttgttaag 2400
gtgagggcct accggagtga gaggttcttg cctagtgagc agatccaggg 2450

ggttgtgata tccgtgatta acctggagcc tagaactggc ttcttgtcca 2500
 accctagggc ctggggccgc tttgacagtg tcatcacagg ccccaacggg 2550
 gcctgtgtgc ctgccttctg tgatgaccag tccctgatg cctactctgc 2600
 ctatgtcttg gcaagcctgg ctggggagga actgcaagca gtggagtctt 2650
 ctccataaatt caacccaaat gcaattggcg tccctcagcc ctatctcaac 2700
 aagctcaact accgtcggac ggaccatgag gatccaaggg ttaaaaagac 2750
 agctttccag attagcatgg ccaagccaag gcccaactca gctgaggaga 2800
 gcaatggggc catctatgcc tttgagaacc tccgggcatg tgaagaggca 2850
 ccaccagtg cagcccaatt ccggttctac cagattgagg gggatcgata 2900
 tgactacaac acagtccct tcaacgaaga tgaccctatg agctggactg 2950
 aagactatct ggcatggtgg ccaaagccga tgggaattcag ggctgctat 3000
 atcaaggtga agattgtggg gccactggaa gtgaatgtgc gatcccgcaa 3050
 catggggggc actcatcggc ggacagtggg gaagctgtat ggaatccgag 3100
 atgtgaggag cactcgggac agggaccagc ccaatgtctc agctgcctgt 3150
 ctggagttca agtgcagtgg gatgctctat gatcaggacc gtgtggaccg 3200
 caccctggtg aaggatcatc ccagggcag ctgccttoga gccagtgtga 3250
 accccatgct gcatgagtac ctggtcaacc acttgccact tgcagtcaac 3300
 aacgacacca gtgagtacac catgctggca cccttgacc cactgggcca 3350
 caactatggc atctacactg tcaactgacca ggaccctgc acggccaagg 3400
 agatcgcgct cggccggtgc tttgatggca catccgatgg ctctccaga 3450
 atcatgaaga gcaatgtggg agtagccctc accttcaact gtgtagagag 3500
 gcaagtaggc cgccagagtg ccttcagta cctocaaagc acccagccc 3550
 agtcccctgc tgcaggcact gtccaaggaa gagtgcctc gaggaggcag 3600
 cagcgagcga gcaggggtg ccagcgccag ggtggagtgg tggcctctct 3650
 gagatttcct agagttgctc aacagccct gatcaactaa gttttgtggt 3700
 acttcaccct cttctgccct catttcatgt gacagccatt gtgagactga 3750
 tgcacaaact gtcacttggt taatttaagc acttctgttt tcgtgaattt 3800
 gcttgtttgt ttcttcatgc ctttacttac tttgtcccat gctactgatt 3850
 ggcacgtggc cccacaatg gcacaataaa gccctttgt gaaactgttc 3900
 tttaaatgaa acacaagaaa ttggccactg gtaaaactct gcagcttcaa 3950
 ctgtacttca tttaatgcca ttaatgcaaa tatacttctt cttctttttg 4000
 catggttttg cccacctctg caatagtgat aatctgatgc tgaagatcaa 4050

ataaccaata taaagcatat ttcttggcct tgctccacag gacataggca 4100
 agccttgatc atagttcata catataaatg gtggtgaaat aaagaaataa 4150
 aacacaatac ttttacttga aatgtaaata acttatttat ttctttgcta 4200
 aatttggaat tctagtgcac attcaaagtt aagctattaa atataggggtg 4250
 atcatagttc ctctaccaag tctggaaaga acatctcctg gtatccacaa 4300
 ttacaccagg ttgctaactg tatttgtaca ttccctttg cattcgcttt 4350
 tgttcttgct agaaaccag tgtagcccag ggcagatgtc aataaatgca 4400
 tactctgtat ttcgaaaaaa 4420

<210> 124
 <211> 1184
 <212> PRT
 <213> Homo sapiens

<400> 124
 Met Val Gly Thr Lys Ala Trp Val Phe Ser Phe Leu Val Leu Glu
 1 5 10 15
 Val Thr Ser Val Leu Gly Arg Gln Thr Met Leu Thr Gln Ser Val
 20 25 30
 Arg Arg Val Gln Pro Gly Lys Lys Asn Pro Ser Ile Phe Ala Lys
 35 40 45
 Pro Ala Asp Thr Leu Glu Ser Pro Gly Glu Trp Thr Thr Trp Phe
 50 55 60
 Asn Ile Asp Tyr Pro Gly Gly Lys Gly Asp Tyr Glu Arg Leu Asp
 65 70 75
 Ala Ile Arg Phe Tyr Tyr Gly Asp Arg Val Cys Ala Arg Pro Leu
 80 85 90
 Arg Leu Glu Ala Arg Thr Thr Asp Trp Thr Pro Ala Gly Ser Thr
 95 100 105
 Gly Gln Val Val His Gly Ser Pro Arg Glu Gly Phe Trp Cys Leu
 110 115 120
 Asn Arg Glu Gln Arg Pro Gly Gln Asn Cys Ser Asn Tyr Thr Val
 125 130 135
 Arg Phe Leu Cys Pro Pro Gly Ser Leu Arg Arg Asp Thr Glu Arg
 140 145 150
 Ile Trp Ser Pro Trp Ser Pro Trp Ser Lys Cys Ser Ala Ala Cys
 155 160 165
 Gly Gln Thr Gly Val Gln Thr Arg Thr Arg Ile Cys Leu Ala Glu
 170 175 180
 Met Val Ser Leu Cys Ser Glu Ala Ser Glu Glu Gly Gln His Cys
 185 190 195
 Met Gly Gln Asp Cys Thr Ala Cys Asp Leu Thr Cys Pro Met Gly
 200 205 210

Gln	Val	Asn	Ala	Asp	Cys	Asp	Ala	Cys	Met	Cys	Gln	Asp	Phe	Met	215	220	225
Leu	His	Gly	Ala	Val	Ser	Leu	Pro	Gly	Gly	Ala	Pro	Ala	Ser	Gly	230	235	240
Ala	Ala	Ile	Tyr	Leu	Leu	Thr	Lys	Thr	Pro	Lys	Leu	Leu	Thr	Gln	245	250	255
Thr	Asp	Ser	Asp	Gly	Arg	Phe	Arg	Ile	Pro	Gly	Leu	Cys	Pro	Asp	260	265	270
Gly	Lys	Ser	Ile	Leu	Lys	Ile	Thr	Lys	Val	Lys	Phe	Ala	Pro	Ile	275	280	285
Val	Leu	Thr	Met	Pro	Lys	Thr	Ser	Leu	Lys	Ala	Ala	Thr	Ile	Lys	290	295	300
Ala	Glu	Phe	Val	Arg	Ala	Glu	Thr	Pro	Tyr	Met	Val	Met	Asn	Pro	305	310	315
Glu	Thr	Lys	Ala	Arg	Arg	Ala	Gly	Gln	Ser	Val	Ser	Leu	Cys	Cys	320	325	330
Lys	Ala	Thr	Gly	Lys	Pro	Arg	Pro	Asp	Lys	Tyr	Phe	Trp	Tyr	His	335	340	345
Asn	Asp	Thr	Leu	Leu	Asp	Pro	Ser	Leu	Tyr	Lys	His	Glu	Ser	Lys	350	355	360
Leu	Val	Leu	Arg	Lys	Leu	Gln	Gln	His	Gln	Ala	Gly	Glu	Tyr	Phe	365	370	375
Cys	Lys	Ala	Gln	Ser	Asp	Ala	Gly	Ala	Val	Lys	Ser	Lys	Val	Ala	380	385	390
Gln	Leu	Ile	Val	Thr	Ala	Ser	Asp	Glu	Thr	Pro	Cys	Asn	Pro	Val	395	400	405
Pro	Glu	Ser	Tyr	Leu	Ile	Arg	Leu	Pro	His	Asp	Cys	Phe	Gln	Asn	410	415	420
Ala	Thr	Asn	Ser	Phe	Tyr	Tyr	Asp	Val	Gly	Arg	Cys	Pro	Val	Lys	425	430	435
Thr	Cys	Ala	Gly	Gln	Gln	Asp	Asn	Gly	Ile	Arg	Cys	Arg	Asp	Ala	440	445	450
Val	Gln	Asn	Cys	Cys	Gly	Ile	Ser	Lys	Thr	Glu	Glu	Arg	Glu	Ile	455	460	465
Gln	Cys	Ser	Gly	Tyr	Thr	Leu	Pro	Thr	Lys	Val	Ala	Lys	Glu	Cys	470	475	480
Ser	Cys	Gln	Arg	Cys	Thr	Glu	Thr	Arg	Ser	Ile	Val	Arg	Gly	Arg	485	490	495
Val	Ser	Ala	Ala	Asp	Asn	Gly	Glu	Pro	Met	Arg	Phe	Gly	His	Val	500	505	510
Tyr	Met	Gly	Asn	Ser	Arg	Val	Ser	Met	Thr	Gly	Tyr	Lys	Gly	Thr	515	520	525

Phe Thr Leu His	Val	Pro Gln Asp Thr	Glu Arg Leu Val Leu Thr	530	535	540
Phe Val Asp Arg	Leu Gln Lys Phe Val	Asn Thr Thr Lys Val Leu		545	550	555
Pro Phe Asn Lys	Lys Gly Ser Ala Val	Phe His Glu Ile Lys Met		560	565	570
Leu Arg Arg Lys	Glu Pro Ile Thr Leu	Glu Ala Met Glu Thr Asn		575	580	585
Ile Ile Pro Leu	Gly Glu Val Val Gly	Glu Asp Pro Met Ala Glu		590	595	600
Leu Glu Ile Pro	Ser Arg Ser Phe Tyr	Arg Gln Asn Gly Glu Pro		605	610	615
Tyr Ile Gly Lys	Val Lys Ala Ser Val	Thr Phe Leu Asp Pro Arg		620	625	630
Asn Ile Ser Thr	Ala Thr Ala Ala Gln	Thr Asp Leu Asn Phe Ile		635	640	645
Asn Asp Glu Gly	Asp Thr Phe Pro Leu	Arg Thr Tyr Gly Met Phe		650	655	660
Ser Val Asp Phe	Arg Asp Glu Val Thr	Ser Glu Pro Leu Asn Ala		665	670	675
Gly Lys Val Lys	Val His Leu Asp Ser	Thr Gln Val Lys Met Pro		680	685	690
Glu His Ile Ser	Thr Val Lys Leu Trp	Ser Leu Asn Pro Asp Thr		695	700	705
Gly Leu Trp Glu	Glu Glu Gly Asp Phe	Lys Phe Glu Asn Gln Arg		710	715	720
Arg Asn Lys Arg	Glu Asp Arg Thr Phe	Leu Val Gly Asn Leu Glu		725	730	735
Ile Arg Glu Arg	Arg Leu Phe Asn Leu	Asp Val Pro Glu Ser Arg		740	745	750
Arg Cys Phe Val	Lys Val Arg Ala Tyr	Arg Ser Glu Arg Phe Leu		755	760	765
Pro Ser Glu Gln	Ile Gln Gly Val Val	Ile Ser Val Ile Asn Leu		770	775	780
Glu Pro Arg Thr	Gly Phe Leu Ser Asn	Pro Arg Ala Trp Gly Arg		785	790	795
Phe Asp Ser Val	Ile Thr Gly Pro Asn	Gly Ala Cys Val Pro Ala		800	805	810
Phe Cys Asp Asp	Gln Ser Pro Asp Ala	Tyr Ser Ala Tyr Val Leu		815	820	825
Ala Ser Leu Ala	Gly Glu Glu Leu Gln	Ala Val Glu Ser Ser Pro		830	835	840

Lys	Phe	Asn	Pro	Asn	Ala	Ile	Gly	Val	Pro	Gln	Pro	Tyr	Leu	Asn	
				845					850					855	
Lys	Leu	Asn	Tyr	Arg	Arg	Thr	Asp	His	Glu	Asp	Pro	Arg	Val	Lys	
				860					865					870	
Lys	Thr	Ala	Phe	Gln	Ile	Ser	Met	Ala	Lys	Pro	Arg	Pro	Asn	Ser	
				875					880					885	
Ala	Glu	Glu	Ser	Asn	Gly	Pro	Ile	Tyr	Ala	Phe	Glu	Asn	Leu	Arg	
				890					895					900	
Ala	Cys	Glu	Glu	Ala	Pro	Pro	Ser	Ala	Ala	His	Phe	Arg	Phe	Tyr	
				905					910					915	
Gln	Ile	Glu	Gly	Asp	Arg	Tyr	Asp	Tyr	Asn	Thr	Val	Pro	Phe	Asn	
				920					925					930	
Glu	Asp	Asp	Pro	Met	Ser	Trp	Thr	Glu	Asp	Tyr	Leu	Ala	Trp	Trp	
				935					940					945	
Pro	Lys	Pro	Met	Glu	Phe	Arg	Ala	Cys	Tyr	Ile	Lys	Val	Lys	Ile	
				950					955					960	
Val	Gly	Pro	Leu	Glu	Val	Asn	Val	Arg	Ser	Arg	Asn	Met	Gly	Gly	
				965					970					975	
Thr	His	Arg	Arg	Thr	Val	Gly	Lys	Leu	Tyr	Gly	Ile	Arg	Asp	Val	
				980					985					990	
Arg	Ser	Thr	Arg	Asp	Arg	Asp	Gln	Pro	Asn	Val	Ser	Ala	Ala	Cys	
				995					1000					1005	
Leu	Glu	Phe	Lys	Cys	Ser	Gly	Met	Leu	Tyr	Asp	Gln	Asp	Arg	Val	
				1010					1015					1020	
Asp	Arg	Thr	Leu	Val	Lys	Val	Ile	Pro	Gln	Gly	Ser	Cys	Arg	Arg	
				1025					1030					1035	
Ala	Ser	Val	Asn	Pro	Met	Leu	His	Glu	Tyr	Leu	Val	Asn	His	Leu	
				1040					1045					1050	
Pro	Leu	Ala	Val	Asn	Asn	Asp	Thr	Ser	Glu	Tyr	Thr	Met	Leu	Ala	
				1055					1060					1065	
Pro	Leu	Asp	Pro	Leu	Gly	His	Asn	Tyr	Gly	Ile	Tyr	Thr	Val	Thr	
				1070					1075					1080	
Asp	Gln	Asp	Pro	Arg	Thr	Ala	Lys	Glu	Ile	Ala	Leu	Gly	Arg	Cys	
				1085					1090					1095	
Phe	Asp	Gly	Thr	Ser	Asp	Gly	Ser	Ser	Arg	Ile	Met	Lys	Ser	Asn	
				1100					1105					1110	
Val	Gly	Val	Ala	Leu	Thr	Phe	Asn	Cys	Val	Glu	Arg	Gln	Val	Gly	
				1115					1120					1125	
Arg	Gln	Ser	Ala	Phe	Gln	Tyr	Leu	Gln	Ser	Thr	Pro	Ala	Gln	Ser	
				1130					1135					1140	
Pro	Ala	Ala	Gly	Thr	Val	Gln	Gly	Arg	Val	Pro	Ser	Arg	Arg	Gln	
				1145					1150					1155	

Gln Arg Ala Ser Arg Gly Gly Gln Arg Gln Gly Gly Val Val Ala
 1160 1165 1170

Ser Leu Arg Phe Pro Arg Val Ala Gln Gln Pro Leu Ile Asn
 1175 1180

<210> 125
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 125
 ctggtgcctc aacagggagc ag 22

<210> 126
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 126
 ccattgtgca ggtcagggtca cag 23

<210> 127
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 127
 ctggagcaag tgctcagctg cctgtggtca gactgggggtc 40

<210> 128
 <211> 2819
 <212> DNA
 <213> Homo sapiens

<400> 128
 ctgcaagttg ttaacgccta acacacaagt atgttaggct tccaccaaag 50
 tcctcaatat acctgaatac gcacaatatc ttaactcttc atatttggtt 100
 ttgggatctg ctttgagggtc ccatcttcat ttaaaaaaaaa atacagagac 150
 ctacctaccc gtacgcatac atacatatgt gtatatatat gtaaaactaga 200
 caaagatcgc agatcataaa gcaagctctg ctttagtttc caagaagatt 250
 acaaagaatt tagagatgta tttgtcaaga tccctgtcga ttcattgccct 300
 ttgggttacg gtgtcctcag tgatgcagcc ctaccctttg gtttggggac 350
 attatgattt gtgtaagact cagatttaca cggaagaagg gaaagtttgg 400
 gattacatgg cctgccagcc ggaatccacg gacatgacaa aatatctgaa 450

agtgaaactc gatcctccgg atattacctg tggagaccct cctgagacgt 500
 tctgtgcaat gggcaatccc tacatgtgca ataatgagtg tgatgcgagt 550
 acccctgagc tggcacaccc ccctgagctg atgtttgatt ttgaaggaag 600
 acatccctcc acattttggc agtctgccac ttggaaggag tatcccaagc 650
 ctctccaggt taacatcact ctgtcttgga gcaaaaccat tgagctaaca 700
 gacaacatag ttattacctt tgaatctggg cgtccagacc aaatgatcct 750
 ggagaagtct ctcgattatg gacgaacatg gcagcoctat cagtattatg 800
 ccacagactg cttagatgct tttcacatgg atcctaaatc cgtgaaggat 850
 ttatcacagc atacggtctt agaaatcatt tgcacagaag agtactcaac 900
 agggatataca acaaatagca aaataatcca ctttgaaatc aaagacaggt 950
 tcgcgctttt tgctggacct cgcctacgca atatggcttc cctctacgga 1000
 cagctggata caaccaagaa actcagagat ttctttacag tcacagacct 1050
 gaggataagg ctgttaagac cagccgttgg ggaaatattt gtagatgagc 1100
 tacacttggc acgctacttt tacgcgatct cagacataaa ggtgcgagga 1150
 aggtgcaagt gtaatctcca tgccactgta tgtgtgtatg acaacagcaa 1200
 attgacatgc gaatgtgagc acaacactac aggtccagac tgtgggaaat 1250
 gcaagaagaa ttatcagggc cgaccttgga gtccaggctc ctatctcccc 1300
 atccccaaag gcactgcaaa tacctgtatc ccagtatatt ccagtattgg 1350
 tacgaatgtc tgcgacaacg agctcctgca ctgccagaac ggagggacgt 1400
 gccacaacaa cgtgcgctgc ctgtgcccgg ccgcatacac gggcatcctc 1450
 tgcgagaagc tgcggtgcga ggaggctggc agctgcggtc ccgactctgg 1500
 ccaggcgcg ccccccgcacg gcaccccagc gctgctgctg ctgaccacgc 1550
 tgctgggaac cgccagcccc ctggtgttct aggtgtcacc tccagccaca 1600
 ccggacgggc ctgtgccgtg gggaagcaga cacaacccaa acatttgcta 1650
 ctaacatagg aaacacacac atacagacac cccactcag acagtgtaca 1700
 aactaagaag gcctaactga actaagccat atttatcacc cgtggacagc 1750
 acatccgagt caagactggt aattttctgac tccagaggag ttggcagctg 1800
 ttgatattat cactgcaaat cacattgcca gctgcagagc atattgtgga 1850
 ttggaaaggc tgcgacagcc ccccaaacag gaaagacaaa aaacaaacaa 1900
 atcaaccgac ctaaaaacat tggctactct agcgtggtgc gccctagtag 1950
 gactccgccc agtgtgtgga ccaacaaaat agcattcttt gctgtcaggt 2000
 gcattgtggg cataaggaaa totgttacia gctgccatat tggcctgctt 2050

ccgtccctga atcccttcca acctgtgctt tagtgaacgt tgctctgtaa 2100
 ccctcgttgg ttgaaagatt tctttgtctg atgttagtga tgcacatgtg 2150
 taacagcccc ctctaaaagc gcaagccagt catacccctg tatatcttag 2200
 cagcactgag tccagtgcga gcacacacccc actatacaag agtggctata 2250
 ggaaaaaaga aagtgtatct atccttttgt attcaaataga agttattttt 2300
 cttgaactac tgtaatatgt agattttttg tattattgoc aatttgtgtt 2350
 accagacaat ctgttaatgt atctaattcg aatcagcaaa gactgacatt 2400
 ttattttgtc ctctttcgtt ctgttttgtt tcactgtgca gagatttctc 2450
 tgtaagggca acgaacgtgc tggcatcaaa gaatatcagt ttacatatat 2500
 aacaagtgtg ataagattcc accaaaggac attctaaatg ttttcttgtt 2550
 gctttaacac tggaagattt aaagaataaa aactcctgca taaacgattt 2600
 caggaatttg tattgcaatt tcttaagatg aaaggaacag ccaccaagca 2650
 gtttcacact cactttactg atttctgtgt ggactgagta cattcagctg 2700
 acgaatttag ttcccaggaa gatggattga tgttcactag cttggacaac 2750
 ttctgcaaaa tatgagacta tttccacttg ggaaaaatta caacagcaaa 2800
 aaaaaaaaaa aaaaaaaaaa 2819

<210> 129

<211> 438

<212> PRT

<213> Homo sapiens

<400> 129

Met	Tyr	Leu	Ser	Arg	Ser	Leu	Ser	Ile	His	Ala	Leu	Trp	Val	Thr
1				5					10					15
Val	Ser	Ser	Val	Met	Gln	Pro	Tyr	Pro	Leu	Val	Trp	Gly	His	Tyr
				20					25					30
Asp	Leu	Cys	Lys	Thr	Gln	Ile	Tyr	Thr	Glu	Glu	Gly	Lys	Val	Trp
				35					40					45
Asp	Tyr	Met	Ala	Cys	Gln	Pro	Glu	Ser	Thr	Asp	Met	Thr	Lys	Tyr
				50					55					60
Leu	Lys	Val	Lys	Leu	Asp	Pro	Pro	Asp	Ile	Thr	Cys	Gly	Asp	Pro
				65					70					75
Pro	Glu	Thr	Phe	Cys	Ala	Met	Gly	Asn	Pro	Tyr	Met	Cys	Asn	Asn
				80					85					90
Glu	Cys	Asp	Ala	Ser	Thr	Pro	Glu	Leu	Ala	His	Pro	Pro	Glu	Leu
				95					100					105
Met	Phe	Asp	Phe	Glu	Gly	Arg	His	Pro	Ser	Thr	Phe	Trp	Gln	Ser
				110					115					120
Ala	Thr	Trp	Lys	Glu	Tyr	Pro	Lys	Pro	Leu	Gln	Val	Asn	Ile	Thr

	125		130		135
Leu Ser Trp Ser	Lys Thr Ile Glu Leu	Thr Asp Asn Ile Val	Ile		
	140		145		150
Thr Phe Glu Ser	Gly Arg Pro Asp Gln	Met Ile Leu Glu Lys	Ser		
	155		160		165
Leu Asp Tyr Gly	Arg Thr Trp Gln Pro	Tyr Gln Tyr Tyr Ala	Thr		
	170		175		180
Asp Cys Leu Asp	Ala Phe His Met Asp	Pro Lys Ser Val Lys	Asp		
	185		190		195
Leu Ser Gln His	Thr Val Leu Glu Ile	Ile Cys Thr Glu Glu	Tyr		
	200		205		210
Ser Thr Gly Tyr	Thr Thr Asn Ser Lys	Ile Ile His Phe Glu	Ile		
	215		220		225
Lys Asp Arg Phe	Ala Leu Phe Ala Gly	Pro Arg Leu Arg Asn	Met		
	230		235		240
Ala Ser Leu Tyr	Gly Gln Leu Asp Thr	Thr Lys Lys Leu Arg	Asp		
	245		250		255
Phe Phe Thr Val	Thr Asp Leu Arg Ile	Arg Leu Leu Arg Pro	Ala		
	260		265		270
Val Gly Glu Ile	Phe Val Asp Glu Leu	His Leu Ala Arg Tyr	Phe		
	275		280		285
Tyr Ala Ile Ser	Asp Ile Lys Val Arg	Gly Arg Cys Lys Cys	Asn		
	290		295		300
Leu His Ala Thr	Val Cys Val Tyr Asp	Asn Ser Lys Leu Thr	Cys		
	305		310		315
Glu Cys Glu His	Asn Thr Thr Gly Pro	Asp Cys Gly Lys Cys	Lys		
	320		325		330
Lys Asn Tyr Gln	Gly Arg Pro Trp Ser	Pro Gly Ser Tyr Leu	Pro		
	335		340		345
Ile Pro Lys Gly	Thr Ala Asn Thr Cys	Ile Pro Ser Ile Ser	Ser		
	350		355		360
Ile Gly Thr Asn	Val Cys Asp Asn Glu	Leu Leu His Cys Gln	Asn		
	365		370		375
Gly Gly Thr Cys	His Asn Asn Val Arg	Cys Leu Cys Pro Ala	Ala		
	380		385		390
Tyr Thr Gly Ile	Leu Cys Glu Lys Leu	Arg Cys Glu Glu Ala	Gly		
	395		400		405
Ser Cys Gly Ser	Asp Ser Gly Gln Gly	Ala Pro Pro His Gly	Thr		
	410		415		420
Pro Ala Leu Leu	Leu Leu Thr Thr Leu	Leu Gly Thr Ala Ser	Pro		
	425		430		435
Leu Val Phe					

<210> 130
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 130
tcgattatgg acgaacatgg cagc 24

<210> 131
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 131
ttctgagatc cctcatcctc 20

<210> 132
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 132
aggttcaggg acagcaagtt tggg 24

<210> 133
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 133
tttgctggac ctcggctacg gaattggctt ccctctacgg acagctggat 50

<210> 134
<211> 1493
<212> DNA
<213> Homo sapiens

<400> 134
cccacgcgtc cgggtgacct gggccgagcc ctcccggctg gctaagattg 50
ctgaggaggc ggcggttagc tggcaggcgc cgacttccga aggccgccgt 100
ccgggcgagg tgtcctcatg acttctcttg tggacctgt cctgatctt 150
ttttgcctgc gtggtacggg taagggatgg actgcccctc tcagcctcta 200
ctgattttta ccacacccaa gatttttttg aatggaggag acggctcaag 250
agtttagcct tgcgactggc ccagtatcca ggctcgaggtt ctgcagaagg 300

ttgtgacttt agtatacatt ttctctcttt cggggacgtg gcctgcatgg 350
 ctatctgctc ctgccagtgt ccagcagcca tggccttctg ctctctggag 400
 accctgtggg ggggaattcac agcttcctat gacactacct gcattggcct 450
 agcctccagg ccatacgctt ttcttgagtt tgacagcatc attcagaaag 500
 tgaagtggca ttttaactat gtaagttcct ctcagatgga gtgcagcttg 550
 gaaaaaattc aggaggagct caagttgcag cctccagogg ttctcactct 600
 ggaggacaca gatgtggcaa atggggtgat gaatggtcac acaccgatgc 650
 acttgagacc tgctcctaatt ttccgaatgg aaccagtgc agccctgggt 700
 atcctctccc tcattctcaa catcatgtgt gctgccctga atctcattcg 750
 aggagttcac cttgcagaac attctttaca ggatccaagg agctggttct 800
 gctggttgga ccaaacctcg tgagccagcc acccctgacc caaatgagga 850
 gagctctgat tctcccatcc gggagcagtg atgtcaaaact tctgctgctg 900
 gggaaatctc atcagcaggg agcctgtgga aaagggcatg tcagtgaat 950
 ctgggaatgg ctggattcgg aaacatctgc ccatgtgtat tgatggcaga 1000
 gctgttgccc acaagcgcct tttatcttagg gtaaaattaa caaatccatt 1050
 ctattcctct gacctatgct tagtacatat gacctttaac ccttacattt 1100
 atatgattct ggggttgctt cagaagtgtt atttcatgaa tcattcatat 1150
 gatttgatcc ccaggattc tattttgttt aatgggcttt tctactaaaa 1200
 gcataaaata ctgaggctga tttagtcagg gcaaaaccat ttactttaca 1250
 tattcgtttt caatacttgc tgttcatgtt acacaagctt cttacggttt 1300
 tcttgtaaca ataaatat ttagtaaaata atgggtacat tttacaaaac 1350
 tcagtagtac aacctaaact tgtataaaag tgtgtaaaaa tgtatagcca 1400
 tttatatcct atgtataaat taaatgaggt ggcttcagaa atggcagaat 1450
 aaatctaaag tgtttattaa aaaaaaaaaa aaaaaaaaaa aag 1493

<210> 135

<211> 228

<212> PRT

<213> Homo sapiens

<400> 135

Met	Ser	Val	Ile	Phe	Phe	Ala	Cys	Val	Val	Arg	Val	Arg	Asp	Gly
1				5					10					15
Leu	Pro	Leu	Ser	Ala	Ser	Thr	Asp	Phe	Tyr	His	Thr	Gln	Asp	Phe
				20				25						30
Leu	Glu	Trp	Arg	Arg	Arg	Leu	Lys	Ser	Leu	Ala	Leu	Arg	Leu	Ala
				35				40						45

Gln	Tyr	Pro	Gly	Arg	Gly	Ser	Ala	Glu	Gly	Cys	Asp	Phe	Ser	Ile	
				50					55					60	
His	Phe	Ser	Ser	Phe	Gly	Asp	Val	Ala	Cys	Met	Ala	Ile	Cys	Ser	
				65					70					75	
Cys	Gln	Cys	Pro	Ala	Ala	Met	Ala	Phe	Cys	Phe	Leu	Glu	Thr	Leu	
				80					85					90	
Trp	Trp	Glu	Phe	Thr	Ala	Ser	Tyr	Asp	Thr	Thr	Cys	Ile	Gly	Leu	
				95					100					105	
Ala	Ser	Arg	Pro	Tyr	Ala	Phe	Leu	Glu	Phe	Asp	Ser	Ile	Ile	Gln	
				110					115					120	
Lys	Val	Lys	Trp	His	Phe	Asn	Tyr	Val	Ser	Ser	Ser	Gln	Met	Glu	
				125					130					135	
Cys	Ser	Leu	Glu	Lys	Ile	Gln	Glu	Glu	Leu	Lys	Leu	Gln	Pro	Pro	
				140					145					150	
Ala	Val	Leu	Thr	Leu	Glu	Asp	Thr	Asp	Val	Ala	Asn	Gly	Val	Met	
				155					160					165	
Asn	Gly	His	Thr	Pro	Met	His	Leu	Glu	Pro	Ala	Pro	Asn	Phe	Arg	
				170					175					180	
Met	Glu	Pro	Val	Thr	Ala	Leu	Gly	Ile	Leu	Ser	Leu	Ile	Leu	Asn	
				185					190					195	
Ile	Met	Cys	Ala	Ala	Leu	Asn	Leu	Ile	Arg	Gly	Val	His	Leu	Ala	
				200					205					210	
Glu	His	Ser	Leu	Gln	Asp	Pro	Arg	Ser	Trp	Phe	Cys	Trp	Leu	Asp	
				215					220					225	

Gln Thr Ser

<210> 136
 <211> 239
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 39, 61, 143, 209
 <223> unknown base

<400> 136
 tgcttcctgg agaccctgtg gtgggaattc acagcttctt atgacactac 50
 ctgcattggc ntagcctcca ggccatacgc ttttcttgag tttgacagca 100
 tcattcagaa agtgaagtgg cattttaact atgtaagttc ctntcagatg 150
 gagtgcagct tggaaaaaat tcaggaggag ctcaagttgc agcctccagc 200
 ggttctcant atggaggaca cagatgtggc aaatgggggt 239

<210> 137
 <211> 2300
 <212> DNA

<213> Homo sapiens

<400> 137

ctcagcggcg cttcctcgta gcgagcctag tggcgggtgt ttgcattgaa 50
acgtgagcgc gacccgacct taaagagtgg ggagcaaagg gaggacagag 100
ccctttaaaa cgaggcgggt ggtgcctgcc cctttaaggg cggggcgctcc 150
ggacgactgt atctgagccc cagactgccc cgagtttctg tcgcaggctg 200
cgaggaaagg cccctaggct gggctctgggt gcttggcggc ggcggcctcc 250
tccccgctcg tctctcccgg gccagaggc acctcggett cagtcatgct 300
gagcagagta tggaagcacc tgactacgaa gtgctatccg tgcgagaaca 350
gctattccac gagaggatcc gcgagtgtat tatatcaaca cttctgtttg 400
caacactgta catcctctgc cacatcttcc tgaccogctt caagaagcct 450
gctgagttca ccacagtgga tgatgaagat gccaccgtca acaagattgc 500
gctcgagctg tgcaccttta ccttggaat tgccctgggt gctgtcctgc 550
tcttgccctt ctccatcatc agcaatgagg tgetgctctc cctgcctcgg 600
aactactaca tccagtggct caacggctcc ctcatccatg gcctctggaa 650
ccttgttttt ctcttcccca acctgtccct catcttctc atgcccttg 700
catatttctt cactgagtct gagggctttg ctggctccag aaagggtgtc 750
ctgggccggg tctatgagac agtggtgatg ttgatgctcc tactctgct 800
ggtgctaggt atggtgtggg tggcatcagc cattgtggac aagaacaagg 850
ccaacagaga gtcactctat gacttttggg agtactatct cccctacctc 900
tactcatgca tctccttctt tggggttctg ctgctcctgg tgtgtactcc 950
actgggtctc gcccgcatgt tctcogtcac tgggaagctg ctagtcaagc 1000
cccggctgct ggaagacctg gaggagcagc tgtactgctc agcctttgag 1050
gaggcagccc tgaccgcgag gatctgtaat cctacttctt gctggctgcc 1100
tttagacatg gagctgctac acagacaggt cctggctctg cagacacaga 1150
gggtcctgct ggagaagagg cggaaggctt cagcctggca acggaacctg 1200
ggctaccccc tggtatgct gtgcttgctg gtgctgacgg gcctgtctgt 1250
gctcattgtg gccatccaca tcttgagct gctcatcgat gaggtgcc 1300
tgccccgagg catgcagggt acctccttag gccaggctct cttctccaag 1350
ctgggctcct ttggtgcctt cattcaggtt gtactcatct ttacctaata 1400
gggtgtcctca gttgtgggct tctatagctc tccactcttc cggagcctgc 1450
ggcccagatg gcacgacact gccatgacgc agataattgg gaactgtgtc 1500

tgtctcctgg tctaagctc agcacttctt gtcttctctc gaaccctggg 1550
 gctcactcgc tttagacctg tgggtgactt tggacgcttc aactggctgg 1600
 gcaattttcta cattgtgttc ctctacaacg cagcctttgc aggcctcacc 1650
 acactctgtc tgggtgaagac cttcactgca gctgtgcggg cagagctgat 1700
 cggggccttt gggctggaca gactgccgct gcccgctctcc ggtttcccc 1750
 aggcattctag gaagacccag caccagtgc ctccagctgg gggtggaag 1800
 gaaaaaactg gacactgcc tctgctgcct aggcctggag ggaagccaa 1850
 ggctacttgg acctcaggac ctggaatctg agaggggtgg tggcagagg 1900
 gagcagagcc atctgcacta ttgcataatc tgagccagag tttgggacca 1950
 ggacctcctg cttttccata cttaactgtg gcctcagcat ggggtagggc 2000
 tgggtgactg ggtctagccc ctgatccaa atctgtttac acatcaatct 2050
 gcctcactgc tgttctgggc catccccata gccatgttta catgatttga 2100
 tgtgcaatag ggtggggtag gggcaggaa aggactgggc cagggcaggc 2150
 tcgggagata gattgtctcc cttgcctctg gccagcaga gcctaagcac 2200
 tgtgctatcc tggaggggct ttggaccacc tgaaagacca aggggatagg 2250
 gaggaggagg cttcagccat cagcaataaa gttgatcca gggaaaaaaa 2300

<210> 138

<211> 489

<212> PRT

<213> Homo sapiens

<400> 138

Met	Glu	Ala	Pro	Asp	Tyr	Glu	Val	Leu	Ser	Val	Arg	Glu	Gln	Leu	1	5	10	15
Phe	His	Glu	Arg	Ile	Arg	Glu	Cys	Ile	Ile	Ser	Thr	Leu	Leu	Phe	20	25	30	
Ala	Thr	Leu	Tyr	Ile	Leu	Cys	His	Ile	Phe	Leu	Thr	Arg	Phe	Lys	35	40	45	
Lys	Pro	Ala	Glu	Phe	Thr	Thr	Val	Asp	Asp	Glu	Asp	Ala	Thr	Val	50	55	60	
Asn	Lys	Ile	Ala	Leu	Glu	Leu	Cys	Thr	Phe	Thr	Leu	Ala	Ile	Ala	65	70	75	
Leu	Gly	Ala	Val	Leu	Leu	Leu	Pro	Phe	Ser	Ile	Ile	Ser	Asn	Glu	80	85	90	
Val	Leu	Leu	Ser	Leu	Pro	Arg	Asn	Tyr	Tyr	Ile	Gln	Trp	Leu	Asn	95	100	105	
Gly	Ser	Leu	Ile	His	Gly	Leu	Trp	Asn	Leu	Val	Phe	Leu	Phe	Pro	110	115	120	
Asn	Leu	Ser	Leu	Ile	Phe	Leu	Met	Pro	Phe	Ala	Tyr	Phe	Phe	Thr				

125										130					135				
Glu	Ser	Glu	Gly	Phe	Ala	Gly	Ser	Arg		Lys	Gly	Val	Leu	Gly	Arg				
				140						145					150				
Val	Tyr	Glu	Thr	Val	Val	Met	Leu	Met		Leu	Leu	Thr	Leu	Leu	Val				
				155						160					165				
Leu	Gly	Met	Val	Trp	Val	Ala	Ser	Ala		Ile	Val	Asp	Lys	Asn	Lys				
				170						175					180				
Ala	Asn	Arg	Glu	Ser	Leu	Tyr	Asp	Phe		Trp	Glu	Tyr	Tyr	Leu	Pro				
				185						190					195				
Tyr	Leu	Tyr	Ser	Cys	Ile	Ser	Phe	Leu		Gly	Val	Leu	Leu	Leu	Leu				
				200						205					210				
Val	Cys	Thr	Pro	Leu	Gly	Leu	Ala	Arg		Met	Phe	Ser	Val	Thr	Gly				
				215						220					225				
Lys	Leu	Leu	Val	Lys	Pro	Arg	Leu	Leu		Glu	Asp	Leu	Glu	Glu	Gln				
				230						235					240				
Leu	Tyr	Cys	Ser	Ala	Phe	Glu	Glu	Ala		Ala	Leu	Thr	Arg	Arg	Ile				
				245						250					255				
Cys	Asn	Pro	Thr	Ser	Cys	Trp	Leu	Pro		Leu	Asp	Met	Glu	Leu	Leu				
				260						265					270				
His	Arg	Gln	Val	Leu	Ala	Leu	Gln	Thr		Gln	Arg	Val	Leu	Leu	Glu				
				275						280					285				
Lys	Arg	Arg	Lys	Ala	Ser	Ala	Trp	Gln		Arg	Asn	Leu	Gly	Tyr	Pro				
				290						295					300				
Leu	Ala	Met	Leu	Cys	Leu	Leu	Val	Leu		Thr	Gly	Leu	Ser	Val	Leu				
				305						310					315				
Ile	Val	Ala	Ile	His	Ile	Leu	Glu	Leu		Leu	Ile	Asp	Glu	Ala	Ala				
				320						325					330				
Met	Pro	Arg	Gly	Met	Gln	Gly	Thr	Ser		Leu	Gly	Gln	Val	Ser	Phe				
				335						340					345				
Ser	Lys	Leu	Gly	Ser	Phe	Gly	Ala	Val		Ile	Gln	Val	Val	Leu	Ile				
				350						355					360				
Phe	Tyr	Leu	Met	Val	Ser	Ser	Val	Val		Gly	Phe	Tyr	Ser	Ser	Pro				
				365						370					375				
Leu	Phe	Arg	Ser	Leu	Arg	Pro	Arg	Trp		His	Asp	Thr	Ala	Met	Thr				
				380						385					390				
Gln	Ile	Ile	Gly	Asn	Cys	Val	Cys	Leu		Leu	Val	Leu	Ser	Ser	Ala				
				395						400					405				
Leu	Pro	Val	Phe	Ser	Arg	Thr	Leu	Gly		Leu	Thr	Arg	Phe	Asp	Leu				
				410						415					420				
Leu	Gly	Asp	Phe	Gly	Arg	Phe	Asn	Trp		Leu	Gly	Asn	Phe	Tyr	Ile				
				425						430					435				
Val	Phe	Leu	Tyr	Asn	Ala	Ala	Phe	Ala		Gly	Leu	Thr	Thr	Leu	Cys				

440	445	450
Leu Val Lys Thr Phe Thr Ala Ala Val Arg Ala Glu Leu Ile Arg		
455	460	465
Ala Phe Gly Leu Asp Arg Leu Pro Leu Pro Val Ser Gly Phe Pro		
470	475	480
Gln Ala Ser Arg Lys Thr Gln His Gln		
485		

<210> 139
 <211> 294
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 53, 57
 <223> unknown base

<400> 139
 ggctgccgag ggaaggcccc ttgggttggt cttggttgct tggcggcggc 50
 ggnttcntcc ccgctcgtcc tccccgggcc cagaggcacc tcggcttcag 100
 tcatgctgag cagagtatgg aagcacctga ctacgaagtg ctatccgtgc 150
 gagaacagct attccacgag aggatccgcy agtgtattat atcaaacatt 200
 ctgtttgcaa cactgtacat cctctgccac atcttcctga cccgcttcaa 250
 gaagcctgct gagttcacca cagtggatga tgaagatgcc accg 294

<210> 140
 <211> 526
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 197, 349
 <223> unknown base

<400> 140
 gaccgacctt aaagagtggg agcaaaggga ggacagagcc ttttaaaacg 50
 aggcggtggt gcctgccctt taagggcggg gcgtccggac gactgtatct 100
 gagccccaga ctgccccgag tttctgtcgc aggctgcgag gaaaggcccc 150
 taggctgggt ctgggtgctt gcggcggcgg cttoctcccc gttgtcntcc 200
 ccgggcccag aggcacctcg gcttcagtca tgctgagcag agtatggaag 250
 cacctgacta cgaagtgcta tccgtgcgag aacagctatt ccacgagagg 300
 atccgcgagt gtattatatt aacacttctg tttgcaaacac tgtacatcnt 350
 ctgccacatc ttctgaccc gcttcaagaa gcctgctgag ttcaccacag 400
 tggatgatga agatgccacc gtcaacaaga ttgcgctcga gctgtgcacc 450

ttaccctgg caattgcoct ggggtgctgtc ctgctcctgc cttctccat 500
 catcagcaat gaggtgctgc actccc 526
 <210> 141
 <211> 24
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 141
 gactgtatct gagccccaga ctgc 24
 <210> 142
 <211> 20
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 142
 tcagcaatga ggtgctgctc 20
 <210> 143
 <211> 24
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 143
 tgaggaagat gagggacagg ttgg 24
 <210> 144
 <211> 50
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 144
 tatggaagca cctgactacg aagtgtatc cgtgcgagaa cagctattcc 50
 <210> 145
 <211> 685
 <212> DNA
 <213> Homo sapiens
 <400> 145
 gatgtgctcc ttggagctgg tgtgcagtgt cctgactgta agatcaagtc 50
 caaacctgtt ttggaattga ggaaacttct cttttgatct cagcccttgg 100
 tgggccaggt cttcatgtg ctgtgggtga tattactggc cctggctcct 150
 gtcagtggac agtttgcaag gacaaccagg ccattattt tcctccagcc 200
 tccatggacc acagtcttcc aaggagagag agtgaccctc acttgcaagg 250

gatttcgctt ctactcacca cagaaaacaa aatggtacca tcggtacctt 300
 gggaaagaaa tactaagaga aaccccagac aatataccttg aggttcagga 350
 atctggagag tacagatgcc agggccaggg ctcccctctc agtagccctg 400
 tgcacttgga tttttcttca gagatgggat ttcctcatgc tgcccaggct 450
 aatgttgaac tcctgggctc aagtgatctg ctcacctagg cctctcaaag 500
 cgctgggatt acagcttcgc tgatcctgca agctccactt tctgtgtttg 550
 aaggagactc tgtggttctg aggtgccggg caaaggcgga agtaacactg 600
 aataatacta tttacaagaa tgataatgtc ctggcattcc ttaataaaaag 650
 aactgacttc caaaaaaaaaa aaaaaaaaaa aaaaa 685

<210> 146
 <211> 124
 <212> PRT
 <213> Homo sapiens

<400> 146
 Met Leu Leu Trp Val Ile Leu Leu Val Leu Ala Pro Val Ser Gly
 1 5 10 15
 Gln Phe Ala Arg Thr Pro Arg Pro Ile Ile Phe Leu Gln Pro Pro
 20 25 30
 Trp Thr Thr Val Phe Gln Gly Glu Arg Val Thr Leu Thr Cys Lys
 35 40 45
 Gly Phe Arg Phe Tyr Ser Pro Gln Lys Thr Lys Trp Tyr His Arg
 50 55 60
 Tyr Leu Gly Lys Glu Ile Leu Arg Glu Thr Pro Asp Asn Ile Leu
 65 70 75
 Glu Val Gln Glu Ser Gly Glu Tyr Arg Cys Gln Ala Gln Gly Ser
 80 85 90
 Pro Leu Ser Ser Pro Val His Leu Asp Phe Ser Ser Glu Met Gly
 95 100 105
 Phe Pro His Ala Ala Gln Ala Asn Val Glu Leu Leu Gly Ser Ser
 110 115 120
 Asp Leu Leu Thr

<210> 147
 <211> 1621
 <212> DNA
 <213> Homo sapiens

<400> 147
 cagaagaggg ggctagctag ctgtctctgc ggaccaggga gacccccgcg 50
 cccccccggt gtgaggcggc ctcacagggc cgggtgggct ggcgagccga 100
 cgcggcggcg gaggaggctg tgaggagtgt gtggaacagg acccgggaca 150

gaggaaccat ggctccgcag aacotgagca ccttttgcct gttgctgcta 200
tacctcatcg gggcggatgat tgccggacga gatttctata agatcttggg 250
ggtgcctcga agtgccctcta taaaggatat taaaaaggcc tataggaaac 300
tagccctgca gcttcatccc gaccggaacc ctgatgatcc acaagcccag 350
gagaaattcc aggatctggg tgctgcttat gaggttctgt cagatagtga 400
gaaacggaaa cagtacgata cttatggtga agaaggatta aaagatggtc 450
atcagagctc ccatggagac attttttcac acttctttgg ggattttggt 500
ttcatgtttg gaggaacccc tcgtcagcaa gacagaaata ttccaagagg 550
aagtgatatt attgtagatc tagaagtcac tttggaagaa gtatatgcag 600
gaaattttgt ggaagtagtt agaaacaaac ctgtggcaag gcaggctcct 650
ggcaaacgga agtgcaattg tcggcaagag atgcggacca cccagctggg 700
ccctggggcg ttccaaatga cccaggaggt ggtctgcgac gaatgcccta 750
atgtcaaact agtgaatgaa gaacgaacgc tggaagtaga aatagagcct 800
ggggtgagag acggcatgga gtaccctttt attggagaag gtgagcctca 850
cgtggatggg gagcctggag atttacgggt ccgaatcaaa gttgtcaagc 900
acccaatatt tgaaaggaga ggagatgatt tgtacacaaa tgtgacaatc 950
tcattagttg agtcactggt tggctttgag atggatatta ctacttgga 1000
tggtcacaag gtacatattt cccgggataa gatcaccagg ccaggagcga 1050
agctatggaa gaaaggggaa gggctcccca actttgacaa caacaatatc 1100
aagggctctt tgataatcac ttttgatgtg gattttccaa aagaacagtt 1150
aacagaggaa gcgagagaag gtatcaaaca gctactgaaa caagggtcag 1200
tgcagaaggt atacaatgga ctgcaaggat attgagagtg aataaaattg 1250
gactttgttt aaaataagtg aataagogat atttattatc tgcaaggttt 1300
ttttgtgtgt gtttttgttt ttattttcaa tatgcaagtt aggtttaatt 1350
tttttatcta atgatcatca tgaaatgaat aagagggctt aagaatttgt 1400
ccatttgcat tcggaaaaga atgaccagca aaaggtttac taatacctct 1450
ccctttgggg atttaatgtc tgggtgctgcc gcctgagttt caagaattaa 1500
agctgcaaga ggactccagg agcaaaagaa acacaatata gagggttgga 1550
gttggttagca atttcattca aaatgccaac tggagaagtc tgtttttaaa 1600
tacattttgt tgttattttt a 1621

<210> 148
<211> 358
<212> PRT

<213> Homo sapiens

<400> 148

Met	Ala	Pro	Gln	Asn	Leu	Ser	Thr	Phe	Cys	Leu	Leu	Leu	Leu	Tyr
1				5					10					15
Leu	Ile	Gly	Ala	Val	Ile	Ala	Gly	Arg	Asp	Phe	Tyr	Lys	Ile	Leu
				20					25					30
Gly	Val	Pro	Arg	Ser	Ala	Ser	Ile	Lys	Asp	Ile	Lys	Lys	Ala	Tyr
				35					40					45
Arg	Lys	Leu	Ala	Leu	Gln	Leu	His	Pro	Asp	Arg	Asn	Pro	Asp	Asp
				50					55					60
Pro	Gln	Ala	Gln	Glu	Lys	Phe	Gln	Asp	Leu	Gly	Ala	Ala	Tyr	Glu
				65					70					75
Val	Leu	Ser	Asp	Ser	Glu	Lys	Arg	Lys	Gln	Tyr	Asp	Thr	Tyr	Gly
				80					85					90
Glu	Glu	Gly	Leu	Lys	Asp	Gly	His	Gln	Ser	Ser	His	Gly	Asp	Ile
				95					100					105
Phe	Ser	His	Phe	Phe	Gly	Asp	Phe	Gly	Phe	Met	Phe	Gly	Gly	Thr
				110					115					120
Pro	Arg	Gln	Gln	Asp	Arg	Asn	Ile	Pro	Arg	Gly	Ser	Asp	Ile	Ile
				125					130					135
Val	Asp	Leu	Glu	Val	Thr	Leu	Glu	Glu	Val	Tyr	Ala	Gly	Asn	Phe
				140					145					150
Val	Glu	Val	Val	Arg	Asn	Lys	Pro	Val	Ala	Arg	Gln	Ala	Pro	Gly
				155					160					165
Lys	Arg	Lys	Cys	Asn	Cys	Arg	Gln	Glu	Met	Arg	Thr	Thr	Gln	Leu
				170					175					180
Gly	Pro	Gly	Arg	Phe	Gln	Met	Thr	Gln	Glu	Val	Val	Cys	Asp	Glu
				185					190					195
Cys	Pro	Asn	Val	Lys	Leu	Val	Asn	Glu	Glu	Arg	Thr	Leu	Glu	Val
				200					205					210
Glu	Ile	Glu	Pro	Gly	Val	Arg	Asp	Gly	Met	Glu	Tyr	Pro	Phe	Ile
				215					220					225
Gly	Glu	Gly	Glu	Pro	His	Val	Asp	Gly	Glu	Pro	Gly	Asp	Leu	Arg
				230					235					240
Phe	Arg	Ile	Lys	Val	Val	Lys	His	Pro	Ile	Phe	Glu	Arg	Arg	Gly
				245					250					255
Asp	Asp	Leu	Tyr	Thr	Asn	Val	Thr	Ile	Ser	Leu	Val	Glu	Ser	Leu
				260					265					270
Val	Gly	Phe	Glu	Met	Asp	Ile	Thr	His	Leu	Asp	Gly	His	Lys	Val
				275					280					285
His	Ile	Ser	Arg	Asp	Lys	Ile	Thr	Arg	Pro	Gly	Ala	Lys	Leu	Trp
				290					295					300

Lys Lys Gly Glu Gly Leu Pro Asn Phe Asp Asn Asn Asn Ile Lys
305 310 315

Gly Ser Leu Ile Ile Thr Phe Asp Val Asp Phe Pro Lys Glu Gln
320 325 330

Leu Thr Glu Glu Ala Arg Glu Gly Ile Lys Gln Leu Leu Lys Gln
335 340 345

Gly Ser Val Gln Lys Val Tyr Asn Gly Leu Gln Gly Tyr
350 355

<210> 149

<211> 509

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 34, 52, 134, 142, 155, 158, 196, 217, 228, 272, 347, 410, 445,
482

<223> unknown base

<400> 149

tgggaccagg gaaccccggg ccccccggtg gagngcctaa caggccggtg 50
gntgcgaccg aagcggcggg cggaggaggt tttgaggatt tttggaacag 100
gacccggaaca gaggaaccat ggttccgcag aacntgagca cnttttgcct 150
gttgntgnta tacttcatcg gggcgggtgat tgccggacga gatttntata 200
agattttggg gtgcctngaa gtgccttnta taaaggatat taaaaaggcc 250
tataggaaac tagccctgca gntttatccc gaccggaacc ctgatgatcc 300
acaagcccag gagaaaattcc aggatttggg tgctgcttat gaggttntgt 350
cagatagtga gaaacggaaa cagtacgata attatggtga agaaggatta 400
aaagatggtn atcagagctc ccatggagac attttttcac acttnttttg 450
ggattttggt ttcattgttg gaggaacccc tngtcagcaa gacagaaata 500
ttccaagag 509

<210> 150

<211> 1532

<212> DNA

<213> Homo sapiens

<400> 150

ggcacgaggc ggcggggcag tcgcgggatg cgcgggggag ccacagcctg 50
aggccctcag gtctctgcag gtgtcgtgga ggaacctagc acctgccatc 100
ctcttcccca atttgccact tccagcagct ttagcccatg aggaggatgt 150
gaccgggact gagtcaggag ccctctggaa gcatggagac tgtggtgatt 200
gttgccatag gtgtgctggc caccatcttt ctggcttcgt ttgcagcctt 250
ggtgctggtt tgcaggcagc gctactgccg gccgcgagac ctgctgcagc 300

gctatgattc taagcccatt gtggacctca ttggtgccat ggagaccag 350
tctgagccct ctgagttaga actggacgat gtcgttatca ccaacccccca 400
cattgaggcc attctggaga atgaagactg gatcgaagat gcctcgggtc 450
tcatgtccca ctgcattgcc atcttgaaga tttgtcacac tctgacagag 500
aagcttggtt ccatgacaat gggctctggg gccaagatga agacttcagc 550
cagtgtcagc gacatcattg tgggtggccaa gcggatcagc cccaggggtg 600
atgatgttgt gaagtcgatg taccctccgt tggaccccaa actcctggac 650
gcacggacga ctgccctgct cctgtctgtc agtcacctgg tgctggtgac 700
aaggaatgcc tgccatctga cgggaggcct ggactggatt gaccagtctc 750
tgtcggctgc tgaggagcat ttggaagtcc ttcgagaagc agccctagct 800
tctgagccag ataaaggcct cccaggccct gaaggcttcc tgcaggagca 850
gtctgcaatt tagtgcctac aggccagcag ctagccatga agggccctgc 900
cgccatccct ggatggctca gcttagcctt ctactttttc ctatagagtt 950
agttgttctc cacggctgga gagttcagct gtgtgtgcat agtaaagcag 1000
gagatccccg tcagtttatg cctcttttgc agttgcaaac tgtggctggt 1050
gagtggcagt ctaatactac agttagggga gatgccattc actctctgca 1100
agaggagtat tgaaaactgg tggactgtca gctttattta gctcacctag 1150
tgttttcaag aaaattgagc caccgtctaa gaaatcaaga ggtttcacat 1200
taaaattaga atttctggcc tctctcgatc ggtcagaatg tgtggcaatt 1250
ctgatctgca ttttcagaag aggacaatca attgaaacta agtaggggtt 1300
tcttcttttg gcaagacttg tactctctca cctggcctgt ttcatttatt 1350
tgtattatct gcctgggtccc tgaggcgtct gggctctctcc tctcccttgc 1400
aggtttgggt ttgaagctga ggaactacaa agttgatgat ttctttttta 1450
tctttatgcc tgcaatttta cctagctacc actaggtgga tagtaaattt 1500
atacttatgt ttccctcaaa aaaaaaaaaa aa 1532

<210> 151
<211> 226
<212> PRT
<213> Homo sapiens

<400> 151
Met Glu Thr Val Val Ile Val Ala Ile Gly Val Leu Ala Thr Ile
1 5 10 15
Phe Leu Ala Ser Phe Ala Ala Leu Val Leu Val Cys Arg Gln Arg
20 25 30
Tyr Cys Arg Pro Arg Asp Leu Leu Gln Arg Tyr Asp Ser Lys Pro

	35	40	45
Ile Val Asp Leu	Ile Gly Ala Met Glu Thr Gln Ser Glu Pro Ser		
	50	55	60
Glu Leu Glu Leu Asp	Asp Val Val Ile Thr Asn Pro His Ile Glu		
	65	70	75
Ala Ile Leu Glu Asn	Glu Asp Trp Ile Glu Asp Ala Ser Gly Leu		
	80	85	90
Met Ser His Cys Ile	Ala Ile Leu Lys Ile Cys His Thr Leu Thr		
	95	100	105
Glu Lys Leu Val Ala	Met Thr Met Gly Ser Gly Ala Lys Met Lys		
	110	115	120
Thr Ser Ala Ser Val	Ser Asp Ile Ile Val Val Ala Lys Arg Ile		
	125	130	135
Ser Pro Arg Val Asp	Asp Val Val Lys Ser Met Tyr Pro Pro Leu		
	140	145	150
Asp Pro Lys Leu Leu	Asp Ala Arg Thr Thr Ala Leu Leu Leu Ser		
	155	160	165
Val Ser His Leu Val	Leu Val Thr Arg Asn Ala Cys His Leu Thr		
	170	175	180
Gly Gly Leu Asp Trp	Ile Asp Gln Ser Leu Ser Ala Ala Glu Glu		
	185	190	195
His Leu Glu Val Leu	Arg Glu Ala Ala Leu Ala Ser Glu Pro Asp		
	200	205	210
Lys Gly Leu Pro Gly	Pro Glu Gly Phe Leu Gln Glu Gln Ser Ala		
	215	220	225

Ile

<210> 152
 <211> 1027
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 1017, 1020
 <223> unknown base

<400> 152
 gcttcatttc tcccgactca gcttcccacc ctgggctttc cgaggtgctt 50
 tcgccgctgt cccaccact gcagccatga tctcottaac ggacacgcag 100
 aaaattggaa tgggattaac aggatttgga gtgtttttcc tgttctttgg 150
 aatgattctc ttttttgaca aagcactact ggctattgga aatgttttat 200
 ttgtagccgg cttggctttt gtaattgggt tagaaagaac attcagattc 250
 ttcttccaaa aacataaaat gaaagctaca gggttttttc tgggtggtgt 300

atttgtagtc cttattgggtt ggcctttgat aggcatgata ttcgaaattt 350
 atggattttt tctcttggtc aggggcttct ttctgtcgt tgttggcttt 400
 attagaagag tgccagtcct tggatccctc ctaaatttac ctggaattag 450
 atcatttgta gataaagttg gagaaagcaa caatatggta taacaacaag 500
 tgaatttgaa gactcattta aaatattgtg ttatttataa agtcatttga 550
 agaattattca gcacaaaatt aaattacatg aaatagcttg taatgttctt 600
 tacaggagtt taaaacgtat agcctacaaa gtaccagcag caaattagca 650
 aagaagcagt gaaaacaggc ttctactcaa gtgaactaag aagaagtcag 700
 caagcaaact gagagaggtg aaatccatgt taatgatgct taagaaactc 750
 ttgaaggcta tttgtgttgt ttttcacaaa tgtgcgaaac tcagccatcc 800
 ttagagaact gtggtgcctg tttcttttct ttttattttg aaggctcagg 850
 agcatccata ggcatttgct ttttagaagt gtccactgca atggcaaaaa 900
 tatttccagt tgcactgtat ctctggaagt gatgcatgaa ttcgattgga 950
 ttgtgtcatt ttaaagtatt aaaaccaagg aaacccaat tttgatgtat 1000
 ggattacttt tttttgngcn cagggcc 1027

<210> 153
 <211> 138
 <212> PRT
 <213> Homo sapiens

<220>
 <221> N-myristoylation Sites
 <222> 11-16, 51-56 and 116-121
 <223> N-myristoylation Sites.

<220>
 <221> Transmembrane domains
 <222> 12-30, 33-52, 69-89 and 93-109
 <223> Transmembrane domains

<220>
 <221> Aminoacyl-transfer RNA Synthetases.
 <222> 49-59
 <223> Aminoacyl-transfer RNA synthetases class-II protein.

<400> 153
 Met Ile Ser Leu Thr Asp Thr Gln Lys Ile Gly Met Gly Leu Thr
 1 5 10 15
 Gly Phe Gly Val Phe Phe Leu Phe Phe Gly Met Ile Leu Phe Phe
 20 25 30
 Asp Lys Ala Leu Leu Ala Ile Gly Asn Val Leu Phe Val Ala Gly
 35 40 45
 Leu Ala Phe Val Ile Gly Leu Glu Arg Thr Phe Arg Phe Phe Phe
 50 55 60

Gln	Lys	His	Lys	Met	Lys	Ala	Thr	Gly	Phe	Phe	Leu	Gly	Gly	Val
				65					70					75
Phe	Val	Val	Leu	Ile	Gly	Trp	Pro	Leu	Ile	Gly	Met	Ile	Phe	Glu
			80						85					90
Ile	Tyr	Gly	Phe	Phe	Leu	Leu	Phe	Arg	Gly	Phe	Phe	Pro	Val	Val
			95						100					105
Val	Gly	Phe	Ile	Arg	Arg	Val	Pro	Val	Leu	Gly	Ser	Leu	Leu	Asn
			110						115					120
Leu	Pro	Gly	Ile	Arg	Ser	Phe	Val	Asp	Lys	Val	Gly	Glu	Ser	Asn
			125						130					135

Asn Met Val

<210> 154
 <211> 405
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 66
 <223> unknown base

<400> 154
 gaagacgtgg cggctctcgc ctgggctggt tcccggcttc atttctcccg 50
 actcagcttc ccaccntggg ctttcogagg tgctttcgcc gctgtcccca 100
 ccactgcagc catgatctcc ttaacggaca cgcagaaaat tggaatggga 150
 ttaaccggat ttggagtgtt tttcctgttc tttggaatga ttctcttttt 200
 tgacaaagca ctactggcta ttggaaatgt tttatttgta gccggcttgg 250
 cttttgtaat tggtttagaa agaacattca gattcttctt ccaaaaacat 300
 aaaatgaaag ctacagggtt ttttctgggt ggtgtatttg tagtccttat 350
 tggttggcct ttgataggca tgatcttcga aatttatgga ttttttctct 400
 tgttc 405

<210> 155
 <211> 1781
 <212> DNA
 <213> Homo sapiens

<400> 155
 ggcacgaggg tgaaccagc cggctccatc tcagcttctg gtttctaagt 50
 ccatgtgcc aaggctgcc ggaaggagac gccttcctga gtcctggatc 100
 tttcttcctt ctggaaatct ttgactgtgg gtagttattt atttctgaat 150
 aagagcgtcc acgcatcatg gacctcgcg gactgctgaa gtctcagttc 200
 ctgtgccacc tggctctctg ctacgtcttt attgcctcag ggctaatacat 250

caacaccatt cagctcttca ctctcctcct ctggcccatt aacaagcagc 300
 tcttccggaa gatcaactgc agactgtcct attgcatctc aagccagctg 350
 gtgatgctgc tggagtgggtg gtcgggcacg gaatgcacca tottcaaggga 400
 cccgcgcgcc tacctcaagt atgggaagga aaatgccatc gtgggttctca 450
 accacaagtt tgaaattgac tttctgtgtg gctggagcct gtccgaacgc 500
 tttgggctgt tagggggctc caaggtcctg gccaagaaag agctggccta 550
 tgtcccaatt atcggctgga tgtgttactt caccgagatg gtcttctgtt 600
 cgcgcaagtg ggagcaggat cgcaagacgg ttgccaccag tttgcagcac 650
 ctccgggact accccgagaa gtattttttc ctgattcact gtgagggcac 700
 acggttcacg gagaagaagc atgagatcag catgcagggtg gcccgggcca 750
 aggggctgcc tcgcctcaag catcacctgt tgccacgaac caagggcttc 800
 gccatcaccg tgaggagctt gagaaatgta gtttcagctg tatatgactg 850
 tacactcaat ttcagaaata atgaaaatcc aacactgctg ggagtcctaa 900
 acggaaagaa ataccatgca gatttgtatg ttaggaggat cccactggaa 950
 gacatccctg aagacgatga cgagtgtctg gcctggctgc acaagctcta 1000
 ccaggagaag gatgcctttc aggaggagta ctacaggacg ggcaccttcc 1050
 cagagacgcc catggtgccc ccccggcggc cctggaccct cgtgaactgg 1100
 ctgttttggg cctcgtgtgt gctctaccct ttcttccagt tctggtcag 1150
 catgatcagg agcgggtctt ccctgacgct ggccagcttc atcctcgtct 1200
 tctttgtggc ctccgtggga gttcgatgga tgattggtgt gacggaaatt 1250
 gacaagggct ctgcctacgg caactctgac agcaagcaga aactgaatga 1300
 ctgactcagg gaggtgtcac catccgaagg gaaccttggg gaactggtgg 1350
 cctctgcata tcctccttag tgggacacgg tgacaaaggc tgggtgagcc 1400
 cctgctgggc acggcggaag tcacgacctc tccagccagg gagtctggtc 1450
 tcaaggccgg atggggagga agatgttttg taatcttttt tccccatgt 1500
 gcttttagtg gctttggttt tctttttgtg cgagtgtgtg tgagaatggc 1550
 tgtgtggtga gtgtgaactt tgttctgtga tcatagaaag ggtatttttag 1600
 gctgcagggg agggcagggc tggggaccga aggggacaag ttcccccttc 1650
 atcctttggt gctgagtttt ctgtaaccct tggttgccag agataaagtg 1700
 aaaagtgcct taggtgagat gactaaatta tgcctccaag aaaaaaaaaat 1750
 taaagtgcct ttctgggtca aaaaaaaaaa a 1781

<210> 156

<211> 378
 <212> PRT
 <213> Homo sapiens

<400> 156

Met	Asp	Leu	Ala	Gly	Leu	Leu	Lys	Ser	Gln	Phe	Leu	Cys	His	Leu	1	5	10	15
Val	Phe	Cys	Tyr	Val	Phe	Ile	Ala	Ser	Gly	Leu	Ile	Ile	Asn	Thr	20	25	30	
Ile	Gln	Leu	Phe	Thr	Leu	Leu	Leu	Trp	Pro	Ile	Asn	Lys	Gln	Leu	35	40	45	
Phe	Arg	Lys	Ile	Asn	Cys	Arg	Leu	Ser	Tyr	Cys	Ile	Ser	Ser	Gln	50	55	60	
Leu	Val	Met	Leu	Leu	Glu	Trp	Trp	Ser	Gly	Thr	Glu	Cys	Thr	Ile	65	70	75	
Phe	Thr	Asp	Pro	Arg	Ala	Tyr	Leu	Lys	Tyr	Gly	Lys	Glu	Asn	Ala	80	85	90	
Ile	Val	Val	Leu	Asn	His	Lys	Phe	Glu	Ile	Asp	Phe	Leu	Cys	Gly	95	100	105	
Trp	Ser	Leu	Ser	Glu	Arg	Phe	Gly	Leu	Leu	Gly	Gly	Ser	Lys	Val	110	115	120	
Leu	Ala	Lys	Lys	Glu	Leu	Ala	Tyr	Val	Pro	Ile	Ile	Gly	Trp	Met	125	130	135	
Trp	Tyr	Phe	Thr	Glu	Met	Val	Phe	Cys	Ser	Arg	Lys	Trp	Glu	Gln	140	145	150	
Asp	Arg	Lys	Thr	Val	Ala	Thr	Ser	Leu	Gln	His	Leu	Arg	Asp	Tyr	155	160	165	
Pro	Glu	Lys	Tyr	Phe	Phe	Leu	Ile	His	Cys	Glu	Gly	Thr	Arg	Phe	170	175	180	
Thr	Glu	Lys	Lys	His	Glu	Ile	Ser	Met	Gln	Val	Ala	Arg	Ala	Lys	185	190	195	
Gly	Leu	Pro	Arg	Leu	Lys	His	His	Leu	Leu	Pro	Arg	Thr	Lys	Gly	200	205	210	
Phe	Ala	Ile	Thr	Val	Arg	Ser	Leu	Arg	Asn	Val	Val	Ser	Ala	Val	215	220	225	
Tyr	Asp	Cys	Thr	Leu	Asn	Phe	Arg	Asn	Asn	Glu	Asn	Pro	Thr	Leu	230	235	240	
Leu	Gly	Val	Leu	Asn	Gly	Lys	Lys	Tyr	His	Ala	Asp	Leu	Tyr	Val	245	250	255	
Arg	Arg	Ile	Pro	Leu	Glu	Asp	Ile	Pro	Glu	Asp	Asp	Asp	Glu	Cys	260	265	270	
Ser	Ala	Trp	Leu	His	Lys	Leu	Tyr	Gln	Glu	Lys	Asp	Ala	Phe	Gln	275	280	285	
Glu	Glu	Tyr	Tyr	Arg	Thr	Gly	Thr	Phe	Pro	Glu	Thr	Pro	Met	Val				

290	295	300
Pro Pro Arg Arg	Pro Trp Thr Leu Val	Asn Trp Leu Phe Trp Ala
305	310	315
Ser Leu Val Leu	Tyr Pro Phe Phe Gln	Phe Leu Val Ser Met Ile
320	325	330
Arg Ser Gly Ser	Ser Leu Thr Leu Ala	Ser Phe Ile Leu Val Phe
335	340	345
Phe Val Ala Ser	Val Gly Val Arg Trp	Met Ile Gly Val Thr Glu
350	355	360
Ile Asp Lys Gly	Ser Ala Tyr Gly Asn	Ser Asp Ser Lys Gln Lys
365	370	375

Leu Asn Asp

<210> 157
 <211> 1849
 <212> DNA
 <213> Homo sapiens

<400> 157
 ctgaggcggc ggtagcatgg agggggagag tacgtcggcg gtgctctcgg 50
 gctttgtgct cggcgcactc gctttccagc acctcaacac ggactcggac 100
 acggaagggtt ttcttcttgg ggaagtaaaa ggtgaagcca agaacagcat 150
 tactgattcc caaatggatg atgttgaagt tgtttataca attgacattc 200
 agaaatatat tccatgctat cagcttttta gcttttataa ttcttcaggc 250
 gaagtaaatg agcaagcact gaagaaaata ttatcaaattg tcaaaaagaa 300
 tgtggtaggt tggtaaaaat tccgtcgtca ttcagatcag atcatgacgt 350
 ttagagagag gctgcttcac aaaaacttgc aggagcattt ttcaaaccac 400
 gaccttggtt ttctgctatt aacaccaagt ataataacag aaagctgctc 450
 tactcatcga ctggaacatt cottatataa acctcaaaaa ggactttttc 500
 acagggtacc tttagtgggt gccaatctgg gcatgtctga acaactgggt 550
 tataaaactg tatcagggtc ctgtatgtcc actggtttta gccgagcagt 600
 acaaacacac agctctaaat tttttgaaga agatggatcc ttaaaggagg 650
 tacataagat aaatgaaatg tatgcttcat tacaagagga attaaagagt 700
 atatgcaaaa aagtggaaga cagtgaacaa gcagtagata aactagtaaa 750
 ggatgtaaac agattaaaac gagaaattga gaaaaggaga ggagcacaga 800
 ttcaggcagc aagagagaag aacatccaaa aagaccctca ggagaacatt 850
 tttctttgtc aggcatctac gacotTTTTT ccaaattctg aattttctca 900
 ttcatgtgtt atgtctttta aaaatagaca tgtttctaaa agtagctgta 950

actacaacca ccatctcgat gtagtagaca atctgacott aatggtagaa 1000
cacactgaca ttcctgaagc tagtccagct agtacaccac aaatcattaa 1050
gcataaagcc ttagacttag atgacagatg gcaattcaag agatctcggg 1100
tgtagatac acaagacaaa cgatctaaag caaatactgg tagtagtaac 1150
caagataaag catccaaaat gagcagccca gaaacagatg aagaaattga 1200
aaagatgaag gggttttggtg aatattcacg gtctctaca ttttgatcct 1250
tttaacctta caaggagatt tttttatttg gctgatgggt aaagccaaac 1300
atttctattg tttttactat gttgagctac ttgcagtaag ttcatttggt 1350
tttactatgt tcacctgttt gcagtaatac acagataact cttagtgcac 1400
ttacttcaca aagtactttt tcaaaccatca gatgctttta tttccaaacc 1450
tttttttcac ctttcactaa gttgttgagg ggaaggctta cacagacaca 1500
ttcttttagaa ttggaaaagt gagaccaggc acagtggctc acacctgtaa 1550
tcccagcact tagggaagac aagtcaggag gattgattga agctaggagt 1600
tagagaccag cctgggcaac gtattgagac catgtctatt aaaaaataaa 1650
atggaaaagc aagaatagcc ttattttcaa aatatggaaa gaaatttata 1700
tgaaaattta tctgagtcac taaaattctc ctttaagtga acttttttag 1750
aagtacatta tggctagagt tgccagataa aatgctggat atcatgcaat 1800
aaatttgcaa aacatcatct aaaattttaa aaaaaaaaaa aaaaaaaaaa 1849

<210> 158

<211> 409

<212> PRT

<213> Homo sapiens

<400> 158

Met	Glu	Gly	Glu	Ser	Thr	Ser	Ala	Val	Leu	Ser	Gly	Phe	Val	Leu
1				5					10					15
Gly	Ala	Leu	Ala	Phe	Gln	His	Leu	Asn	Thr	Asp	Ser	Asp	Thr	Glu
				20					25					30
Gly	Phe	Leu	Leu	Gly	Glu	Val	Lys	Gly	Glu	Ala	Lys	Asn	Ser	Ile
				35					40					45
Thr	Asp	Ser	Gln	Met	Asp	Asp	Val	Glu	Val	Val	Tyr	Thr	Ile	Asp
				50					55					60
Ile	Gln	Lys	Tyr	Ile	Pro	Cys	Tyr	Gln	Leu	Phe	Ser	Phe	Tyr	Asn
				65					70					75
Ser	Ser	Gly	Glu	Val	Asn	Glu	Gln	Ala	Leu	Lys	Lys	Ile	Leu	Ser
				80					85					90
Asn	Val	Lys	Lys	Asn	Val	Val	Gly	Trp	Tyr	Lys	Phe	Arg	Arg	His
				95					100					105

Ser Asp Gln Ile	Met Thr Phe Arg Glu	Arg Leu Leu His Lys Asn	110	115	120
Leu Gln Glu His	Phe Ser Asn Gln Asp	Leu Val Phe Leu Leu Leu	125	130	135
Thr Pro Ser Ile	Ile Thr Glu Ser Cys	Ser Thr His Arg Leu Glu	140	145	150
His Ser Leu Tyr	Lys Pro Gln Lys Gly	Leu Phe His Arg Val Pro	155	160	165
Leu Val Val Ala	Asn Leu Gly Met Ser	Glu Gln Leu Gly Tyr Lys	170	175	180
Thr Val Ser Gly	Ser Cys Met Ser Thr	Gly Phe Ser Arg Ala Val	185	190	195
Gln Thr His Ser	Ser Lys Phe Phe Glu	Glu Asp Gly Ser Leu Lys	200	205	210
Glu Val His Lys	Ile Asn Glu Met Tyr	Ala Ser Leu Gln Glu Glu	215	220	225
Leu Lys Ser Ile	Cys Lys Lys Val Glu	Asp Ser Glu Gln Ala Val	230	235	240
Asp Lys Leu Val	Lys Asp Val Asn Arg	Leu Lys Arg Glu Ile Glu	245	250	255
Lys Arg Arg Gly	Ala Gln Ile Gln Ala	Ala Arg Glu Lys Asn Ile	260	265	270
Gln Lys Asp Pro	Gln Glu Asn Ile Phe	Leu Cys Gln Ala Leu Arg	275	280	285
Thr Phe Phe Pro	Asn Ser Glu Phe Leu	His Ser Cys Val Met Ser	290	295	300
Leu Lys Asn Arg	His Val Ser Lys Ser	Ser Cys Asn Tyr Asn His	305	310	315
His Leu Asp Val	Val Asp Asn Leu Thr	Leu Met Val Glu His Thr	320	325	330
Asp Ile Pro Glu	Ala Ser Pro Ala Ser	Thr Pro Gln Ile Ile Lys	335	340	345
His Lys Ala Leu	Asp Leu Asp Asp Arg	Trp Gln Phe Lys Arg Ser	350	355	360
Arg Leu Leu Asp	Thr Gln Asp Lys Arg	Ser Lys Ala Asn Thr Gly	365	370	375
Ser Ser Asn Gln	Asp Lys Ala Ser Lys	Met Ser Ser Pro Glu Thr	380	385	390
Asp Glu Glu Ile	Glu Lys Met Lys Gly	Phe Gly Glu Tyr Ser Arg	395	400	405
Ser Pro Thr Phe					

<210> 159
<211> 2651
<212> DNA
<213> Homo sapiens

<400> 159
ggcacagccg cgcggcggag ggcagagtca gccgagccga gtccagccgg 50
acgagcggac cagcgcaggg cagcccaagc agcgcgcagc gaacgcccgc 100
cgccgcccac accctctgcg gtccccgcgg cgctgccac ccttccctcc 150
ttccccgcgt cccgcctcg ccggccagtc agcttgccgg gttcgctgcc 200
ccgcgaaacc ccgaggtcac cagcccgccg ctctgcttcc ctgggcccgc 250
cgccgcctcc acgccctcct tctccctgg cccggcgctt ggcaccgggg 300
accgttgctt gacgcgaggc ccagctctac ttttcgcccc gcgtctcctc 350
cgctgctcg cctcttccac caactccaac tcttctccc tccagctcca 400
ctcgctagtc cccgactccg ccagccctcg gcccgctgcc gtagcgccgc 450
ttcccgctcg gtcccaaagg tgggaacgcg tccgccccgg cccgcacat 500
ggcacgggtt ggcttgcccg cgcttctctg caccctggca gtgctcagcg 550
ccgcgctgct ggctgccgag ctcaagtcca aaagtgtctc ggaagtgcga 600
cgtctttacg tgtccaaagg ctccaacaag aacgatgcc ccctccacga 650
gatcaacggt gatcatttga agatctgtcc ccagggttct acctgctgct 700
ctcaagagat ggaggagaag tacagcctgc aaagtaaaga tgatttcaa 750
agtgtggtca gcgaacagtg caatcatttg caagctgtct ttgcttcacg 800
ttacaagaag tttgatgaat tcttcaaaga actacttgaa aatgcagaga 850
aatccctgaa tgatatgttt gtgaagacat atggccattt atacatgcaa 900
aattctgagc tatttaaaga tctcttcgta gagttgaaac gttactacgt 950
ggtgggaaat gtgaacctgg aagaaatgct aaatgacttc tgggctcgcc 1000
tcctggagcg gatgttccgc ctggtgaact ccagtagca ctttacagat 1050
gagtatctgg aatgtgtgag caagtatacg gagcagctga agcccttcgg 1100
agatgtccct cgcaaattga agctccaggt tactcgtgct tttgtagcag 1150
cccgtacttt cgctcaaggc ttagcggttg cgggagatgt cgtgagcaag 1200
gtctccgtgg taaaccccac agcccagtg acccatgccc tgttgaagat 1250
gatctactgc tcccactgcc ggggtctcgt gactgtgaag ccatgttaca 1300
actactgctc aaacatcatg agaggctgtt tggccaacca aggggatctc 1350
gattttgaat ggaacaattt catagatgct atgctgatgg tggcagagag 1400
gctagagggt cctttcaaca ttgaatcgg catggatccc atcgatgtga 1450

agattttctga tgctattatg aacatgcagg ataatagtgt tcaagtgtct 1500
 cagaagggttt tccagggatg tggaccccc aagcccctcc cagctggacg 1550
 aattttctcgt tccatctctg aaagtgcctt cagtgtctgc ttcagaccac 1600
 atcacccccga ggaacgcccc accacagcag ctggcactag tttggaccga 1650
 ctgggttactg atgtcaagga gaaactgaaa caggccaaga aattctgggtc 1700
 ctcccttccg agcaacgttt gcaacgatga gaggatggct gcaggaaaacg 1750
 gcaatgagga tgactgttgg aatgggaaag gcaaaagcag gtacctgttt 1800
 gcagtgcag gaaatggatt agccaaccag ggcaacaacc cagaggtcca 1850
 ggttgacacc agcaaaccag acatactgat cttcgtcaa atcatggctc 1900
 ttcgagtgat gaccagcaag atgaagaatg catacaatgg gaacgacgtg 1950
 gacttctttg atatcagtga tgaaagtagt ggagaaggaa gtggaagtgg 2000
 ctgtgagtat cagcagtgcc cttcagagtt tgactacaat gccactgacc 2050
 atgctgggaa gagtgccaat gagaaagccg acagtgtctg tgtccgtcct 2100
 ggggcacagg cctacctcct cactgtcttc tgcatcttgt tcttggttat 2150
 gcagagagag tggagataat tctcaaactc tgagaaaaag tgttcatcaa 2200
 aaagttaaaa ggcaccagtt atcacttttc taccatccta gtgactttgc 2250
 tttttaaatg aatggacaac aatgtacagt ttttactatg tggccactgg 2300
 ttaagaagt gctgactttg ttttctcatt cagttttggg aggaaaaggg 2350
 actgtgcatt gagttggttc ctgctcccc aaaccatgtt aaacgtggct 2400
 aacagtgtag gtacagaact atagttagtt gtgcatttgt gattttatca 2450
 ctctattatt tgtttgtatg tttttttctc atttcgtttg tgggtttttt 2500
 tttccaactg tgatctcgcc ttgtttotta caagcaaacc agggtcctct 2550
 cttggcacgt aacatgtacg tatttctgaa atattaaata gctgtacaga 2600
 agcagggtttt atttatcatg ttatcttatt aaaagaaaaa gcccaaaaag 2650
 c 2651

<210> 160

<211> 556

<212> PRT

<213> Homo sapiens

<400> 160

Met	Ala	Arg	Phe	Gly	Leu	Pro	Ala	Leu	Leu	Cys	Thr	Leu	Ala	Val
1				5					10					15

Leu	Ser	Ala	Ala	Leu	Leu	Ala	Ala	Glu	Leu	Lys	Ser	Lys	Ser	Cys
				20					25					30

Ser	Glu	Val	Arg	Arg	Leu	Tyr	Val	Ser	Lys	Gly	Phe	Asn	Lys	Asn
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

35										40					45				
Asp	Ala	Pro	Leu	His	Glu	Ile	Asn	Gly	Asp	His	Leu	Lys	Ile	Cys					
				50					55					60					
Pro	Gln	Gly	Ser	Thr	Cys	Cys	Ser	Gln	Glu	Met	Glu	Glu	Lys	Tyr					
				65					70					75					
Ser	Leu	Gln	Ser	Lys	Asp	Asp	Phe	Lys	Ser	Val	Val	Ser	Glu	Gln					
				80					85					90					
Cys	Asn	His	Leu	Gln	Ala	Val	Phe	Ala	Ser	Arg	Tyr	Lys	Lys	Phe					
				95					100					105					
Asp	Glu	Phe	Phe	Lys	Glu	Leu	Leu	Glu	Asn	Ala	Glu	Lys	Ser	Leu					
				110					115					120					
Asn	Asp	Met	Phe	Val	Lys	Thr	Tyr	Gly	His	Leu	Tyr	Met	Gln	Asn					
				125					130					135					
Ser	Glu	Leu	Phe	Lys	Asp	Leu	Phe	Val	Glu	Leu	Lys	Arg	Tyr	Tyr					
				140					145					150					
Val	Val	Gly	Asn	Val	Asn	Leu	Glu	Glu	Met	Leu	Asn	Asp	Phe	Trp					
				155					160					165					
Ala	Arg	Leu	Leu	Glu	Arg	Met	Phe	Arg	Leu	Val	Asn	Ser	Gln	Tyr					
				170					175					180					
His	Phe	Thr	Asp	Glu	Tyr	Leu	Glu	Cys	Val	Ser	Lys	Tyr	Thr	Glu					
				185					190					195					
Gln	Leu	Lys	Pro	Phe	Gly	Asp	Val	Pro	Arg	Lys	Leu	Lys	Leu	Gln					
				200					205					210					
Val	Thr	Arg	Ala	Phe	Val	Ala	Ala	Arg	Thr	Phe	Ala	Gln	Gly	Leu					
				215					220					225					
Ala	Val	Ala	Gly	Asp	Val	Val	Ser	Lys	Val	Ser	Val	Val	Asn	Pro					
				230					235					240					
Thr	Ala	Gln	Cys	Thr	His	Ala	Leu	Leu	Lys	Met	Ile	Tyr	Cys	Ser					
				245					250					255					
His	Cys	Arg	Gly	Leu	Val	Thr	Val	Lys	Pro	Cys	Tyr	Asn	Tyr	Cys					
				260					265					270					
Ser	Asn	Ile	Met	Arg	Gly	Cys	Leu	Ala	Asn	Gln	Gly	Asp	Leu	Asp					
				275					280					285					
Phe	Glu	Trp	Asn	Asn	Phe	Ile	Asp	Ala	Met	Leu	Met	Val	Ala	Glu					
				290					295					300					
Arg	Leu	Glu	Gly	Pro	Phe	Asn	Ile	Glu	Ser	Val	Met	Asp	Pro	Ile					
				305					310					315					
Asp	Val	Lys	Ile	Ser	Asp	Ala	Ile	Met	Asn	Met	Gln	Asp	Asn	Ser					
				320					325					330					
Val	Gln	Val	Ser	Gln	Lys	Val	Phe	Gln	Gly	Cys	Gly	Pro	Pro	Lys					
				335					340					345					
Pro	Leu	Pro	Ala	Gly	Arg	Ile	Ser	Arg	Ser	Ile	Ser	Glu	Ser	Ala					

350					355					360				
Phe	Ser	Ala	Arg	Phe	Arg	Pro	His	His	Pro	Glu	Glu	Arg	Pro	Thr
				365					370					375
Thr	Ala	Ala	Gly	Thr	Ser	Leu	Asp	Arg	Leu	Val	Thr	Asp	Val	Lys
				380					385					390
Glu	Lys	Leu	Lys	Gln	Ala	Lys	Lys	Phe	Trp	Ser	Ser	Leu	Pro	Ser
				395					400					405
Asn	Val	Cys	Asn	Asp	Glu	Arg	Met	Ala	Ala	Gly	Asn	Gly	Asn	Glu
				410					415					420
Asp	Asp	Cys	Trp	Asn	Gly	Lys	Gly	Lys	Ser	Arg	Tyr	Leu	Phe	Ala
				425					430					435
Val	Thr	Gly	Asn	Gly	Leu	Ala	Asn	Gln	Gly	Asn	Asn	Pro	Glu	Val
				440					445					450
Gln	Val	Asp	Thr	Ser	Lys	Pro	Asp	Ile	Leu	Ile	Leu	Arg	Gln	Ile
				455					460					465
Met	Ala	Leu	Arg	Val	Met	Thr	Ser	Lys	Met	Lys	Asn	Ala	Tyr	Asn
				470					475					480
Gly	Asn	Asp	Val	Asp	Phe	Phe	Asp	Ile	Ser	Asp	Glu	Ser	Ser	Gly
				485					490					495
Glu	Gly	Ser	Gly	Ser	Gly	Cys	Glu	Tyr	Gln	Gln	Cys	Pro	Ser	Glu
				500					505					510
Phe	Asp	Tyr	Asn	Ala	Thr	Asp	His	Ala	Gly	Lys	Ser	Ala	Asn	Glu
				515					520					525
Lys	Ala	Asp	Ser	Ala	Gly	Val	Arg	Pro	Gly	Ala	Gln	Ala	Tyr	Leu
				530					535					540
Leu	Thr	Val	Phe	Cys	Ile	Leu	Phe	Leu	Val	Met	Gln	Arg	Glu	Trp
				545					550					555

Arg

<210> 161
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 161
 ctccgtggta aacccacag ccc 23

<210> 162
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 162
tcacatcgat gggatccatg accg 24

<210> 163
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 163
ggtctcgtga ctgtgaagcc atgttacaac tactgctcaa acatcatgag 50

<210> 164
<211> 870
<212> DNA
<213> Homo sapiens

<400> 164
ctcgccctca aatgggaacg ctggcctggg actaaagcat agaccaccag 50
gctgagtatc ctgacctgag tcacccccag ggatcaggag cctccagcag 100
ggaaccttcc attatattct tcaagcaact tacagctgca ccgacagttg 150
cgatgaaagt tctaattctt tccctcctcc tgttgctgcc actaatgctg 200
atgtccatgg tctctagcag cctgaatcca ggggtcgcca gaggccacag 250
ggaccgaggc caggcttcta ggagatggct ccaggaaggc ggccaagaat 300
gtgagtgcaa agattggtc ctgagagccc cgagaagaaa attcatgaca 350
gtgtctgggc tgccaaagaa gcagtgcgcc tgtgatcatt tcaagggcaa 400
tgtgaagaaa acaagacacc aaaggcacca cagaaagcca aacaagcatt 450
ccagagcctg ccagcaatct ctcaaacaat gtcagctaag aagctttgct 500
ctgcctttgt aggagctctg agcgcccact cttccaatta aacatttctca 550
gccaagaaga cagtgagcac acctaccaga cactcttctt ctcccacctc 600
actctccac tgtacccacc cctaaatcat tccagtgtc tcaaaaagca 650
tgtttttcaa gatcattttg tttgttgctc tctctagtgt cttcttctct 700
cgtcagtctt agcctgtgcc ctccccttac ccaggcttag gcttaattac 750
ctgaaagatt ccaggaaact gtagcttcct agctagtgtc atttaacctt 800
aatgcaatc aggaaagtag caaacagaag tcaataaata tttttaaatg 850
tcaaaaaaaaa aaaaaaaaaa 870

<210> 165
<211> 119
<212> PRT
<213> Homo sapiens

<400> 165
Met Lys Val Leu Ile Ser Ser Leu Leu Leu Leu Pro Leu Met

1	5	10	15
Leu Met Ser Met Val Ser Ser Ser Leu Asn Pro Gly Val Ala Arg	20	25	30
Gly His Arg Asp Arg Gly Gln Ala Ser Arg Arg Trp Leu Gln Glu	35	40	45
Gly Gly Gln Glu Cys Glu Cys Lys Asp Trp Phe Leu Arg Ala Pro	50	55	60
Arg Arg Lys Phe Met Thr Val Ser Gly Leu Pro Lys Lys Gln Cys	65	70	75
Pro Cys Asp His Phe Lys Gly Asn Val Lys Lys Thr Arg His Gln	80	85	90
Arg His His Arg Lys Pro Asn Lys His Ser Arg Ala Cys Gln Gln	95	100	105
Phe Leu Lys Gln Cys Gln Leu Arg Ser Phe Ala Leu Pro Leu	110	115	

<210> 166
 <211> 551
 <212> DNA
 <213> Homo sapiens

<400> 166
 aatggctgtc ttagtacttc gcctgacagt tgtcctggga ctgcttgtct 50
 tattcctgac ctgctatgca gacgacaaac cagacaagcc agacgacaag 100
 ccagacgact cgggcaaaga cccaaagcca gacttcccca aattcctaag 150
 cctcctgggc acagagatca ttgagaatgc agtcgagttc atcctccgct 200
 ccatgtccag gagcacagga tttatggaat ttgatgataa tgaaggaaaa 250
 cattcatcaa agtgacatcc tcaggacaca cccatgtggc tcctggacaa 300
 tccaagagca gccaaatcct gcttttccag tttggctcca caagtccctcc 350
 aggacagagc cctcaaagca actcccaacg agttctcagg attcaggctc 400
 tggcttcaac caaacagaac tcattttgaa caccctgact gcatttttgc 450
 ttttagaaag ttagaataaa tatggcgctt tgggatcaca tagttgatgg 500
 agaggaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550
 a 551

<210> 167
 <211> 87
 <212> PRT
 <213> Homo sapiens

<400> 167
 Met Ala Val Leu Val Leu Arg Leu Thr Val Val Leu Gly Leu Leu
 1 5 10 15
 Val Leu Phe Leu Thr Cys Tyr Ala Asp Asp Lys Pro Asp Lys Pro

20	25	30
Asp Asp Lys Pro Asp Asp Ser Gly Lys Asp Pro Lys Pro Asp Phe		
35	40	45
Pro Lys Phe Leu Ser Leu Leu Gly Thr Glu Ile Ile Glu Asn Ala		
50	55	60
Val Glu Phe Ile Leu Arg Ser Met Ser Arg Ser Thr Gly Phe Met		
65	70	75
Glu Phe Asp Asp Asn Glu Gly Lys His Ser Ser Lys		
80	85	

<210> 168
 <211> 1371
 <212> DNA
 <213> Homo sapiens

<400> 168
 ggacgccagc gcctgcagag gctgagcagg gaaaaagcca gtgccccagc 50
 ggaagcacag ctacagagctg gtctgccatg gacatcctgg tcccactcct 100
 gcagctgctg gtgctgcttc ttaccctgcc cctgcacctc atggctctgc 150
 tgggctgctg gcagcccctg tgcaaaagct acttccccta cctgatggcc 200
 gtgctgactc ccaagagcaa ccgcaagatg gagagcaaga aacgggagct 250
 cttcagccag ataaaggggc ttacaggagc ctccgggaaa gtggccctac 300
 tggagctggg ctgcggaacc ggagccaact ttcagttcta cccaccgggc 350
 tgcaggggtca cctgcctaga cccaaatccc cactttgaga agttcctgac 400
 aaagagcatg gctgagaaca ggcacctcca atatgagcgg tttgtggtgg 450
 ctcttgagga ggacatgaga cagctggctg atggctccat ggatgtggtg 500
 gtctgcactc tgggtgctgtg ctctgtgcag agcccaagga aggtcctgca 550
 ggaggtccgg agagtactga gaccgggagg tgtgctcttt ttctgggagc 600
 atgtggcaga accatatgga agctgggcct tcatgtggca gcaagttttc 650
 gagcccacct ggaaacacat tggggatggc tgctgcctca ccagagagac 700
 ctggaaggat cttgagaacg cccagttctc cgaaatccaa atggaacgac 750
 agccccctcc cttgaagtgg ctacctgttg ggccccacat catgggaaag 800
 gctgtcaaac aatctttccc aagctccaag gcaactatct gctccttccc 850
 cagcctccaa ttagaacaag ccaccaccca gcctatctat cttccactga 900
 gagggaccta gcagaatgag agaagacatt catgtaccac ctactagtcc 950
 ctctctcccc aacctctgcc agggcaatct ctaacttcaa tccgccttc 1000
 gacagtgaaa aagctctact totacgtga cccagggagg aaacactagg 1050
 accctgttgt atcctcaact gcaagtttct ggactagtct cccaacgttt 1100

gcctcccaat gttgtccctt tocttgcgtt ccattggtaaa gctcctctcg 1150
 ctttccctcct gaggtacac ccattgcgtct ctaggaactg gtcacaaaag 1200
 tcatgggtgcc tgcattccctg ccaagccccc ctgacctct ctccccacta 1250
 ccaccttcct cctgagctgg gggcaccagg gagaatcaga gatgctgggg 1300
 atgccagagc aagactcaaa gaggcagagg ttttgttctc aaatattttt 1350
 taataaatag acgaaaccac g 1371

<210> 169
 <211> 277
 <212> PRT
 <213> Homo sapiens

<400> 169
 Met Asp Ile Leu Val Pro Leu Leu Gln Leu Leu Val Leu Leu Leu
 1 5 10 15
 Thr Leu Pro Leu His Leu Met Ala Leu Leu Gly Cys Trp Gln Pro
 20 25 30
 Leu Cys Lys Ser Tyr Phe Pro Tyr Leu Met Ala Val Leu Thr Pro
 35 40 45
 Lys Ser Asn Arg Lys Met Glu Ser Lys Lys Arg Glu Leu Phe Ser
 50 55 60
 Gln Ile Lys Gly Leu Thr Gly Ala Ser Gly Lys Val Ala Leu Leu
 65 70 75
 Glu Leu Gly Cys Gly Thr Gly Ala Asn Phe Gln Phe Tyr Pro Pro
 80 85 90
 Gly Cys Arg Val Thr Cys Leu Asp Pro Asn Pro His Phe Glu Lys
 95 100 105
 Phe Leu Thr Lys Ser Met Ala Glu Asn Arg His Leu Gln Tyr Glu
 110 115 120
 Arg Phe Val Val Ala Pro Gly Glu Asp Met Arg Gln Leu Ala Asp
 125 130 135
 Gly Ser Met Asp Val Val Val Cys Thr Leu Val Leu Cys Ser Val
 140 145 150
 Gln Ser Pro Arg Lys Val Leu Gln Glu Val Arg Arg Val Leu Arg
 155 160 165
 Pro Gly Gly Val Leu Phe Phe Trp Glu His Val Ala Glu Pro Tyr
 170 175 180
 Gly Ser Trp Ala Phe Met Trp Gln Gln Val Phe Glu Pro Thr Trp
 185 190 195
 Lys His Ile Gly Asp Gly Cys Cys Leu Thr Arg Glu Thr Trp Lys
 200 205 210
 Asp Leu Glu Asn Ala Gln Phe Ser Glu Ile Gln Met Glu Arg Gln
 215 220 225

Pro Pro Pro Leu Lys Trp Leu Pro Val Gly Pro His Ile Met Gly
230 235 240

Lys Ala Val Lys Gln Ser Phe Pro Ser Ser Lys Ala Leu Ile Cys
245 250 255

Ser Phe Pro Ser Leu Gln Leu Glu Gln Ala Thr His Gln Pro Ile
260 265 270

Tyr Leu Pro Leu Arg Gly Thr
275

<210> 170
<211> 1621
<212> DNA
<213> Homo sapiens

<400> 170
gtgggattta tttgagtgc agatcgtttt ctcaagtgtg gtggaagttg 50
cctcatcgca ggcagatgtt ggggctttgt ccgaacagct cccctctgcc 100
agcttctgta gataagggtt aaaaactaat atttatatga cagaagaaaa 150
agatgtcatt ccgtaaagta aacatcatca tcttggtcct ggctgttgc 200
ctcttcttac tggttttgca ccataacttc ctcaagttga gcagtttggt 250
aaggaatgag gttacagatt caggaattgt agggcctcaa cctatagact 300
ttgtcccaaa tgctctccga catgcagtag atgggagaca agaggagatt 350
cctgtggtca tcgctgcac tgaagacagg cttggggggg ccattgcagc 400
tataaacagc attcagcaca aactcgctc caatgtgatt ttctacattg 450
ttactctcaa caatacagca gaccatctcc ggtcctggct caacagtgat 500
tccctgaaaa gcatcagata caaaattgtc aattttgacc ctaaaactttt 550
ggaaggaaaa gtaaaggagg atcctgacca gggggaatcc atgaaacctt 600
taacctttgc aaggttctac ttgccaatc tggttcccag cgcaaagaag 650
gcatatatac tggatgatga tgtaattgtg caaggtgata ttcttgccct 700
ttacaataca gcactgaagc caggacatgc agctgcattt tcagaagatt 750
gtgattcagc ctctactaaa gttgtcatcc gtggagcagg aaaccagtac 800
aattacattg gctatcttga ctataaaaag gaaagaattc gtaagctttc 850
catgaaagcc agcatttgc catttaatcc tggagttttt gttgcaaacc 900
tgacggaatg gaaacgacag aatataacta accaactgga aaaatggatg 950
aaactcaatg tagaagaggg actgtatagc agaaccctgg ctggtagcat 1000
cacaacacct cctctgctta tcgtatttta tcaacagcac tctaccatcg 1050
atcctatgtg gaatgtccgc caccttggtt ccagtgtctg aaaacgatat 1100
tcacctcagt ttgtaaaggc tgccaagtta ctccattgga atggacattt 1150

gaagccatgg ggaaggactg cttcatatac tgatgtttgg gaaaaatggt 1200
 atattccaga cccaacaggc aaattcaacc taatccgaag atataccgag 1250
 atctcaaaca taaagtgaaa cagaatttga actgtaagca agcattttctc 1300
 aggaagtcct ggaagatagc atgcatggga agtaacagtt gctaggcttc 1350
 aatgcctatc ggtagcaagc catggaaaaa gatgtgtcag ctaggtaaag 1400
 atgacaaact gccctgtctg gcagtcagct tcccagacag actatagact 1450
 ataaatatgt ctccatctgc cttaccaagt gttttcttac tacaatgctg 1500
 aatgactgga aagaagaact gatatggcta gttcagctag ctggtacaga 1550
 taattcaaaa ctgctgttgg ttttaatttt gtaacctgtg gcctgatctg 1600
 taaataaaaac ttacattttt c 1621

<210> 171
 <211> 371
 <212> PRT
 <213> Homo sapiens

<400> 171

Met	Ser	Phe	Arg	Lys	Val	Asn	Ile	Ile	Ile	Leu	Val	Leu	Ala	Val	1	5	10	15
Ala	Leu	Phe	Leu	Leu	Val	Leu	His	His	Asn	Phe	Leu	Ser	Leu	Ser	20	25	30	
Ser	Leu	Leu	Arg	Asn	Glu	Val	Thr	Asp	Ser	Gly	Ile	Val	Gly	Pro	35	40	45	
Gln	Pro	Ile	Asp	Phe	Val	Pro	Asn	Ala	Leu	Arg	His	Ala	Val	Asp	50	55	60	
Gly	Arg	Gln	Glu	Glu	Ile	Pro	Val	Val	Ile	Ala	Ala	Ser	Glu	Asp	65	70	75	
Arg	Leu	Gly	Gly	Ala	Ile	Ala	Ala	Ile	Asn	Ser	Ile	Gln	His	Asn	80	85	90	
Thr	Arg	Ser	Asn	Val	Ile	Phe	Tyr	Ile	Val	Thr	Leu	Asn	Asn	Thr	95	100	105	
Ala	Asp	His	Leu	Arg	Ser	Trp	Leu	Asn	Ser	Asp	Ser	Leu	Lys	Ser	110	115	120	
Ile	Arg	Tyr	Lys	Ile	Val	Asn	Phe	Asp	Pro	Lys	Leu	Leu	Glu	Gly	125	130	135	
Lys	Val	Lys	Glu	Asp	Pro	Asp	Gln	Gly	Glu	Ser	Met	Lys	Pro	Leu	140	145	150	
Thr	Phe	Ala	Arg	Phe	Tyr	Leu	Pro	Ile	Leu	Val	Pro	Ser	Ala	Lys	155	160	165	
Lys	Ala	Ile	Tyr	Met	Asp	Asp	Asp	Val	Ile	Val	Gln	Gly	Asp	Ile	170	175	180	
Leu	Ala	Leu	Tyr	Asn	Thr	Ala	Leu	Lys	Pro	Gly	His	Ala	Ala	Ala				

185					190					195				
Phe	Ser	Glu	Asp	Cys	Asp	Ser	Ala	Ser	Thr	Lys	Val	Val	Ile	Arg
				200					205					210
Gly	Ala	Gly	Asn	Gln	Tyr	Asn	Tyr	Ile	Gly	Tyr	Leu	Asp	Tyr	Lys
				215					220					225
Lys	Glu	Arg	Ile	Arg	Lys	Leu	Ser	Met	Lys	Ala	Ser	Thr	Cys	Ser
				230					235					240
Phe	Asn	Pro	Gly	Val	Phe	Val	Ala	Asn	Leu	Thr	Glu	Trp	Lys	Arg
				245					250					255
Gln	Asn	Ile	Thr	Asn	Gln	Leu	Glu	Lys	Trp	Met	Lys	Leu	Asn	Val
				260					265					270
Glu	Glu	Gly	Leu	Tyr	Ser	Arg	Thr	Leu	Ala	Gly	Ser	Ile	Thr	Thr
				275					280					285
Pro	Pro	Leu	Leu	Ile	Val	Phe	Tyr	Gln	Gln	His	Ser	Thr	Ile	Asp
				290					295					300
Pro	Met	Trp	Asn	Val	Arg	His	Leu	Gly	Ser	Ser	Ala	Gly	Lys	Arg
				305					310					315
Tyr	Ser	Pro	Gln	Phe	Val	Lys	Ala	Ala	Lys	Leu	Leu	His	Trp	Asn
				320					325					330
Gly	His	Leu	Lys	Pro	Trp	Gly	Arg	Thr	Ala	Ser	Tyr	Thr	Asp	Val
				335					340					345
Trp	Glu	Lys	Trp	Tyr	Ile	Pro	Asp	Pro	Thr	Gly	Lys	Phe	Asn	Leu
				350					355					360
Ile	Arg	Arg	Tyr	Thr	Glu	Ile	Ser	Asn	Ile	Lys				
				365					370					

<210> 172
 <211> 585
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 71, 76, 86, 91, 162, 220, 269, 281
 <223> unknown base

<400> 172
 tgggtttttgc cccataaatt ccctcagctt gagcagtttg ttaaggaatg 50
 aggttacaga ttcaggaatt ntaggnctc aacctntaga ntttgtccca 100
 aatgtttctcc gacatgcagt agatgggaga caagaggaga ttctgttgtt 150
 catcgctgca tntgaagaca ggcttggggg ggccattgca gctataaaca 200
 gcattcagca caacactcgn tccaatgtga ttttctacat tgttactctc 250
 aacaatacag cagacatnt ccggtcctgg ntcaacagtg attccctgaa 300
 aagcatcaga tacaaaattg tcaattttga ccctaaactt ttggaaggaa 350

aagtaaagga ggatcctgac cagggggaat ccatgaaacc tttaaccttt 400
gcaaggttct acttgccaat tctgggtccc agcgcaaaga aggccatata 450
catggatgat gatgtaattg tgcaagggtga tattcttgcc ctttacaata 500
cagcactgaa gccaggacat gcagctgcat tttcagaaga ttgtgattca 550
gcctctacta aagttgtcat ccgtggagca ggaaa 585

<210> 173
<211> 1866
<212> DNA
<213> Homo sapiens

<400> 173
cgacgtcta gcggttaccg ctgcgggctg gctgggcgta gtggggctgc 50
gcggtgcca cggagctaga gggcaagtgt gctcggcca gcgtgcaggg 100
aacgcgggcg gccagacaac gggctgggct ccggggcctg cggcgcgggc 150
gctgagctgg cagggcggggt cggggcgcggt gctgcatccg catctcctcc 200
atcgctgca gtaagggcgg ccgcggcgag cctttgaggg gaacgacttg 250
tcggagccct aaccaggggt gtctctgagc ctggtgggat ccccgagcgg 300
tcacatcact ttccgatcac ttcaaagtgg ttaaaaacta atatttatat 350
gacagaagaa aaagatgtca ttccgtaaag taaacatcat catcttggtc 400
ctgggctgtt gctctcttct tactggtttt gcaccataac ttcctcagct 450
tgaggcagtt tgtaagga tgagggtaca gattcaggaa ttgtagggcc 500
tcaacctata ggactttgtc ccaaagtctc tccgacatgc agtagatggg 550
agacaagagg agattcctgt ggtcatcgct gcacttgaag acaggcttgg 600
gggggccatt gcagctataa acagcattca gcacaacact cgctccaatg 650
tgattttcta cattgttact ctcaacaata cagcagacca tctccggtcc 700
tgggtcaaac agtgattccc tgaaaagcat cagatacaaa attgtcaatt 750
ttgacctaa acttttgga ggaaggtaa aggaggatcc tgaccagggg 800
gaatccatga aacctttaac ctttgcaagg ttctacttgc caattctggg 850
ttcccagcgc aaagaaggcc atatacatgg atgatgatgt aattgtgcaa 900
ggtgatattc ttgcccttta caatacagca ctgaagccag gacatgcagc 950
tgcattttca gaagattgtg attcagcctc tactaaagtt gtcacccgtg 1000
gagcaggaaa ccagtacaat tacattggct atcttgacta taaaaaggaa 1050
agaattcgta agctttccat gaaagccagc acttgctcat ttaatcctgg 1100
agtttttgtt gcaaacctga cggaatggaa acgacagaat ataactaacc 1150
aactggaaaa atggatgaaa ctcaatgtag aagagggact gtatagcaga 1200

accctggctg gtagcatcac aacacctcct ctgcttatcg tattttatca 1250
 acagcactct accatcgatc ctatgtggaa tgtccgccac cttggttcca 1300
 gtgctggaaa acgatattca cctcagtttg taaaggctgc caagttactc 1350
 cattggaatg gacatttgaa gccatgggga aggactgctt catatactga 1400
 tgtttgggga aaaatggtat attccagacc caacaggcaa attcaaccta 1450
 atccgaagat ataccgagat ctcaaacata aagtgaacaa gaatttgaac 1500
 tgtaagcaag cattttctcag gaagtcctgg aagatagcat gcgtgggaag 1550
 taacagttgc taggcttcaa tgcctatcgg tagcaagcca tggaaaaaga 1600
 tgtgtcagct aggtaaagat gacaaactgc cctgtctggc agtcagcttc 1650
 ccagacagac tatagactat aaatatgtct ccatctgcct taccaagtgt 1700
 tttcttacta caatgctgaa tgactggaaa gaagaactga tatggctagt 1750
 tcagctagct ggtacagata attcaaaact gctgttggtt ttaattttgt 1800
 aacctgtggc ctgatctgta aataaaactt acatttttca ataggtaaaa 1850
 aaaaaaaaaa aaaaaa 1866

<210> 174
 <211> 823
 <212> DNA
 <213> Homo sapiens

<400> 174
 ctgcaggtag acatctccac tgcccaggaa tcaactgagcg tgcagacagc 50
 acagcctcct ctgaaggccg gccataccag agtoctgctt cggcatgggc 100
 ctcaccattg aggcagctcc actgtctgtg ctggtctgag ggtgctgcct 150
 gtcattggggg cagccatctc ccaggggggc ctcategcca tcgtctgcaa 200
 cggctctcgtg ggcttcttgc tgetgctgct ctgggtcatc ctctgctggg 250
 cctgccattc tcgtctgccg acgttgactc tctctctgaa tccagtccca 300
 actccagccc tggccctgt cctgagaagg cccaccacc ccagaagccc 350
 agccatgaag gcagctacct gctgcagccc tgaaggcccc tggcctagcc 400
 tggagcccag gacctaaagc cacctcacct agagcctgga attaggatcc 450
 cagagttcag ccagcctggg gtccagaact caagagtccg cctgcttgga 500
 gctggaccca gggcccaga gtotagccag cttggctcca ataggagctc 550
 agtggcccta aggagatggg cctgggggtg gggcttatga gttggtgcta 600
 gagccagggc catctggact atgctccatc ccaagggccca agggtcaggg 650
 gccgggtcca ctctttccct aggctgagca cctctaggcc ctctaggttg 700
 ggggaagcaaa ctggaaccca tggcaataat aggagggtgt ccaggctggg 750

ccccccccct ggctcctccca gtgtttgctg gataataaat ggaactatgg 800

ctctaaaaaaa aaaaaaaaaa aaa 823

<210> 175
<211> 87
<212> PRT
<213> Homo sapiens

<400> 175
Met Gly Ala Ala Ile Ser Gln Gly Ala Leu Ile Ala Ile Val Cys
1 5 10 15
Asn Gly Leu Val Gly Phe Leu Leu Leu Leu Leu Trp Val Ile Leu
20 25 30
Cys Trp Ala Cys His Ser Arg Leu Pro Thr Leu Thr Leu Ser Leu
35 40 45
Asn Pro Val Pro Thr Pro Ala Leu Ala Pro Val Leu Arg Arg Pro
50 55 60
His His Pro Arg Ser Pro Ala Met Lys Ala Ala Thr Cys Cys Ser
65 70 75
Pro Glu Gly Pro Trp Pro Ser Leu Glu Pro Arg Thr
80 85

<210> 176
<211> 1660
<212> DNA
<213> Homo sapiens

<400> 176
gtttgaattc cttcaactat acccacagtc caaaagcaga ctcaactgtgt 50
cccaggctac cagttcctcc aagcaagtca tttcccttat ttaaccgatg 100
tgtccctcaa acacctgagt gctactccct atttgcatct gttttgataa 150
atgatgttga caccctccac cgaattctaa gtggaatcat gtcgggaaga 200
gatacaatcc ttggcctgtg tatcctogca ttagccttgt ctttggccat 250
gatgtttacc ttcagattca tcaccacct tctgggtcac attttcattt 300
cattgggttat tttgggattg ttgtttgtct gcggtgtttt atggtggctg 350
tattatgact ataccaacga cctcagcata gaattggaca cagaaaggga 400
aaatatgaag tgcgtgctgg gggttgctat cgtatccaca ggcatacagg 450
cagtgtgtct cgtcttgatt ttgtttctca gaaagagaat aaaattgaca 500
gttgagcttt tccaaatcac aaataaagcc atcagcagtg ctcccttcct 550
gctgttccag ccactgtgga catttgccat cctcattttc ttctgggtcc 600
tctgggtggc tgtgtgctg agcctgggaa ctgcaggagc tgcccaggtt 650
atggaaggcg gccaaagtga atataagccc ctttcgggca ttcggtacat 700
gtgggtcgtac catttaattg gcctcatctg gactagtga ttcatacctt 750

cgtgccagca aatgactata gctggggcag tggttacttg ttatttcaac 800
 agaagtaaaa atgatcctcc tgatcatccc atcctttcgt ctctctccat 850
 tctctttcttc taccatcaag gaaccgttgt gaaagggta tttttaatct 900
 ctgtggtgag gattccgaga atcattgtca tgtacatgca aaacgcactg 950
 aaagaacagc agcatgggtgc attgtccagg tacctgttcc gatgctgcta 1000
 ctgctgtttc tgggtgtcttg acaaatacct gctccatctc aaccagaatg 1050
 catatactac aactgctatt aatgggacag atttctgtac atcagcaaaa 1100
 gatgcattca aaatcttgct caagaactca agtcacttta catctattaa 1150
 ctgcttttga gacttcataa tttttctagg aaagggtgta gtgggtgtgtt 1200
 tcaactgtttt tggaggactc atggccttta actacaatcg ggcattccag 1250
 gtgtgggcag tccctctgtt attggtagct ttttttgcct acttagtagc 1300
 ccatagtttt ttatctgtgt ttgaaactgt gctggatgca cttttcctgt 1350
 gttttgctgt tgatctggaa acaaatgatg gatcgtcaga aaagccctac 1400
 tttatggatc aagaatttct gagtttcgta aaaaggagca acaaattaaa 1450
 caatgcaagg gcacagcagg acaagcactc attaaggaat gaggagggaa 1500
 cagaactcca ggccattgtg agatagatac ccatttaggt atctgtacct 1550
 ggaaaacatt tccttctaag agccatttac agaatagaag atgagaccac 1600
 tagagaaaag ttagtgaatt tttttttaa agacctaata aaccctattc 1650
 ttcttcaaaa 1660

<210> 177
 <211> 445
 <212> PRT
 <213> Homo sapiens

<400> 177
 Met Ser Gly Arg Asp Thr Ile Leu Gly Leu Cys Ile Leu Ala Leu
 1 5 10 15
 Ala Leu Ser Leu Ala Met Met Phe Thr Phe Arg Phe Ile Thr Thr
 20 25 30
 Leu Leu Val His Ile Phe Ile Ser Leu Val Ile Leu Gly Leu Leu
 35 40 45
 Phe Val Cys Gly Val Leu Trp Trp Leu Tyr Tyr Asp Tyr Thr Asn
 50 55 60
 Asp Leu Ser Ile Glu Leu Asp Thr Glu Arg Glu Asn Met Lys Cys
 65 70 75
 Val Leu Gly Phe Ala Ile Val Ser Thr Gly Ile Thr Ala Val Leu
 80 85 90
 Leu Val Leu Ile Phe Val Leu Arg Lys Arg Ile Lys Leu Thr Val

95										100					105				
Glu	Leu	Phe	Gln	Ile	Thr	Asn	Lys	Ala	Ile	Ser	Ser	Ala	Pro	Phe					
				110					115					120					
Leu	Leu	Phe	Gln	Pro	Leu	Trp	Thr	Phe	Ala	Ile	Leu	Ile	Phe	Phe					
				125					130					135					
Trp	Val	Leu	Trp	Val	Ala	Val	Leu	Leu	Ser	Leu	Gly	Thr	Ala	Gly					
				140					145					150					
Ala	Ala	Gln	Val	Met	Glu	Gly	Gly	Gln	Val	Glu	Tyr	Lys	Pro	Leu					
				155					160					165					
Ser	Gly	Ile	Arg	Tyr	Met	Trp	Ser	Tyr	His	Leu	Ile	Gly	Leu	Ile					
				170					175					180					
Trp	Thr	Ser	Glu	Phe	Ile	Leu	Ala	Cys	Gln	Gln	Met	Thr	Ile	Ala					
				185					190					195					
Gly	Ala	Val	Val	Thr	Cys	Tyr	Phe	Asn	Arg	Ser	Lys	Asn	Asp	Pro					
				200					205					210					
Pro	Asp	His	Pro	Ile	Leu	Ser	Ser	Leu	Ser	Ile	Leu	Phe	Phe	Tyr					
				215					220					225					
His	Gln	Gly	Thr	Val	Val	Lys	Gly	Ser	Phe	Leu	Ile	Ser	Val	Val					
				230					235					240					
Arg	Ile	Pro	Arg	Ile	Ile	Val	Met	Tyr	Met	Gln	Asn	Ala	Leu	Lys					
				245					250					255					
Glu	Gln	Gln	His	Gly	Ala	Leu	Ser	Arg	Tyr	Leu	Phe	Arg	Cys	Cys					
				260					265					270					
Tyr	Cys	Cys	Phe	Trp	Cys	Leu	Asp	Lys	Tyr	Leu	Leu	His	Leu	Asn					
				275					280					285					
Gln	Asn	Ala	Tyr	Thr	Thr	Thr	Ala	Ile	Asn	Gly	Thr	Asp	Phe	Cys					
				290					295					300					
Thr	Ser	Ala	Lys	Asp	Ala	Phe	Lys	Ile	Leu	Ser	Lys	Asn	Ser	Ser					
				305					310					315					
His	Phe	Thr	Ser	Ile	Asn	Cys	Phe	Gly	Asp	Phe	Ile	Ile	Phe	Leu					
				320					325					330					
Gly	Lys	Val	Leu	Val	Val	Cys	Phe	Thr	Val	Phe	Gly	Gly	Leu	Met					
				335					340					345					
Ala	Phe	Asn	Tyr	Asn	Arg	Ala	Phe	Gln	Val	Trp	Ala	Val	Pro	Leu					
				350					355					360					
Leu	Leu	Val	Ala	Phe	Phe	Ala	Tyr	Leu	Val	Ala	His	Ser	Phe	Leu					
				365					370					375					
Ser	Val	Phe	Glu	Thr	Val	Leu	Asp	Ala	Leu	Phe	Leu	Cys	Phe	Ala					
				380					385					390					
Val	Asp	Leu	Glu	Thr	Asn	Asp	Gly	Ser	Ser	Glu	Lys	Pro	Tyr	Phe					
				395					400					405					
Met	Asp	Gln	Glu	Phe	Leu	Ser	Phe	Val	Lys	Arg	Ser	Asn	Lys	Leu					

410	415	420
Asn Asn Ala Arg Ala Gln Gln Asp Lys His Ser Leu Arg Asn Glu		
425	430	435
Glu Gly Thr Glu Leu Gln Ala Ile Val Arg		
440	445	

<210> 178
 <211> 2773
 <212> DNA
 <213> Homo sapiens

<400> 178
 gttcgattag ctctcttgag aagaagagaa aaggttcttg gacctctccc 50
 tgtttcttcc ttagaataat ttgtatggga tttgtgatgc aggaaagcct 100
 aagggaaaaa gaatattcat tctgtgtggt gaaaattttt tgaaaaaaa 150
 attgccttct tcaaacaagg gtgtcattct gatatttatg aggactgttg 200
 ttctcaactat gaaggcatct gttattgaaa tgttccttgt tttgctggtg 250
 actggagtac attcaaaca agaaacggca aagaagatta aaaggcccaa 300
 gttcactgtg cctcagatca actgcgatgt caaagccgga aagatcatcg 350
 atcctgagtt cattgtgaaa tgtccagcag gatgccaaga ccccaaatac 400
 catgtttatg gcactgacgt gtatgcatcc tactccagtg tgtgtggcgc 450
 tgccgtacac agtgggtgtgc ttgataattc aggagggaaa atacttgttc 500
 ggaagggtgc tggacagtct gggtacaaag ggagttattc caacgggtgtc 550
 caatcgttat ccctaccacg atggagagaa tcctttatcg tcttagaaag 600
 taaacccaaa aagggtgtaa cctaccatc agctcttaca tactcatcat 650
 cgaaaagtcc agctgcccaa gcaggtgaga ccacaaaagc ctatcagagg 700
 ccacctatc cagggacaac tgcacagccg gtcactctga tgcagcttct 750
 ggctgtcact gtagctgtgg ccacccccac caccttgcca aggccatccc 800
 cttctgctgc ttctaccacc agcatcccca gaccacaatc agtgggcccac 850
 aggagccagg agatggatct ctggtccact gccacctaca caagcagcca 900
 aaacaggccc agagctgatc caggtatcca aaggcaagat ccttcaggag 950
 ctgccttcca gaaacctgtt ggagcggatg tcagcctggg acttggtcca 1000
 aaagaagaat tgagcacaca gtctttggag ccagtatccc tgggagatcc 1050
 aaactgcaaa attgacttgt cgtttttaat tgatgggagc accagcattg 1100
 gcaaacggcg attccgaatc cagaagcagc tcctggctga tgttgcccaa 1150
 gctcttgaca ttggccctgc cgttccactg atgggtgttg tccagtatgg 1200
 agacaaccct gctactcact ttaacctcaa gacacacag aattctcgag 1250

atctgaagac agccatagag aaaattactc agagaggagg acttttcta 1300
 gtaggtcggg ccatctcctt tgtgaccaag aacttctttt ccaaagccaa 1350
 tggaaacaga agcggggctc ccaatgtggt ggtggtgatg gtggatggct 1400
 ggcccacgga caaagtggag gaggcctcaa gacttgcgag agagtcagga 1450
 atcaacattt tcttcatcac cattgaaggt gctgctgaaa atgagaagca 1500
 gtatgtgggt gagcccaact ttgcaaaca ggccgtgtgc agaacaaacg 1550
 gcttctactc gctccacgtg cagagctggg ttggcctcca caagaccctg 1600
 cagcctctgg tgaagcgggt ctgcgacact gaccgcctgg cctgcagcaa 1650
 gacctgcttg aactcggctg acattggctt cgtcatcgac ggctccagca 1700
 gtgtggggac gggcaacttc cgcaccgtcc tccagtttgt gaccaacctc 1750
 accaaagagt ttgagatttc cgacacggac acgcgcatcg gggccgtgca 1800
 gtacacctac gaacagcggc tggagtttgg gttcgacaag tacagcagca 1850
 agcctgacat cctcaacgcc atcaagaggg tgggctactg gagtgggtggc 1900
 accagcacgg gggctgccat caacttcgcc ctggagcagc tcttcaagaa 1950
 gtccaagccc aacaagagga agttaatgat cctcatcacc gacgggagg 2000
 cctacgacga cgtccggatc ccagccatgg ctgcccattc gaagggagt 2050
 atcacctatg cgataggcgt tgcctgggct gcccaagagg agctagaagt 2100
 cattgccact caccgcgcca gagaccactc cttctttgtg gacgagtttg 2150
 acaacctcca tcagtatgtc cccaggatca tccagaacat ttgtacagag 2200
 ttcaactcac agcctcgga ctgaattcag agcaggcaga gcaccagcaa 2250
 gtgctgcttt actaactgac gtgttgacc accccaccgc ttaatggggc 2300
 acgcacggtg catcaagtct tgggcagggc atggagaaaac aaatgtcttg 2350
 ttattattct ttgccatcat gctttttcat attccaaaac ttggagttac 2400
 aaagatgatc acaaacgtat agaatgagcc aaaaggctac atcatgttga 2450
 ggggtgctgga gattttacat tttgacaatt gttttcaaaa taaatgttcg 2500
 gaatacagtg cagcccttac gacaggctta cgtagagctt ttgtgagatt 2550
 ttttaagttgt tatttctgat ttgaactctg taaccctcag caagtttcat 2600
 ttttgtcatg acaatgtagg aattgctgaa ttaaatgttt agaaggatga 2650
 aaaataaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2700
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2750
 aaaaaaaaaa aaaaaaaaaa aag 2773

<210> 179

<211> 678
 <212> PRT
 <213> Homo sapiens

<400> 179

Met	Arg	Thr	Val	Val	Leu	Thr	Met	Lys	Ala	Ser	Val	Ile	Glu	Met	1	5	10	15
Phe	Leu	Val	Leu	Leu	Val	Thr	Gly	Val	His	Ser	Asn	Lys	Glu	Thr	20	25	30	
Ala	Lys	Lys	Ile	Lys	Arg	Pro	Lys	Phe	Thr	Val	Pro	Gln	Ile	Asn	35	40	45	
Cys	Asp	Val	Lys	Ala	Gly	Lys	Ile	Ile	Asp	Pro	Glu	Phe	Ile	Val	50	55	60	
Lys	Cys	Pro	Ala	Gly	Cys	Gln	Asp	Pro	Lys	Tyr	His	Val	Tyr	Gly	65	70	75	
Thr	Asp	Val	Tyr	Ala	Ser	Tyr	Ser	Ser	Val	Cys	Gly	Ala	Ala	Val	80	85	90	
His	Ser	Gly	Val	Leu	Asp	Asn	Ser	Gly	Gly	Lys	Ile	Leu	Val	Arg	95	100	105	
Lys	Val	Ala	Gly	Gln	Ser	Gly	Tyr	Lys	Gly	Ser	Tyr	Ser	Asn	Gly	110	115	120	
Val	Gln	Ser	Leu	Ser	Leu	Pro	Arg	Trp	Arg	Glu	Ser	Phe	Ile	Val	125	130	135	
Leu	Glu	Ser	Lys	Pro	Lys	Lys	Gly	Val	Thr	Tyr	Pro	Ser	Ala	Leu	140	145	150	
Thr	Tyr	Ser	Ser	Ser	Lys	Ser	Pro	Ala	Ala	Gln	Ala	Gly	Glu	Thr	155	160	165	
Thr	Lys	Ala	Tyr	Gln	Arg	Pro	Pro	Ile	Pro	Gly	Thr	Thr	Ala	Gln	170	175	180	
Pro	Val	Thr	Leu	Met	Gln	Leu	Leu	Ala	Val	Thr	Val	Ala	Val	Ala	185	190	195	
Thr	Pro	Thr	Thr	Leu	Pro	Arg	Pro	Ser	Pro	Ser	Ala	Ala	Ser	Thr	200	205	210	
Thr	Ser	Ile	Pro	Arg	Pro	Gln	Ser	Val	Gly	His	Arg	Ser	Gln	Glu	215	220	225	
Met	Asp	Leu	Trp	Ser	Thr	Ala	Thr	Tyr	Thr	Ser	Ser	Gln	Asn	Arg	230	235	240	
Pro	Arg	Ala	Asp	Pro	Gly	Ile	Gln	Arg	Gln	Asp	Pro	Ser	Gly	Ala	245	250	255	
Ala	Phe	Gln	Lys	Pro	Val	Gly	Ala	Asp	Val	Ser	Leu	Gly	Leu	Val	260	265	270	
Pro	Lys	Glu	Glu	Leu	Ser	Thr	Gln	Ser	Leu	Glu	Pro	Val	Ser	Leu	275	280	285	
Gly	Asp	Pro	Asn	Cys	Lys	Ile	Asp	Leu	Ser	Phe	Leu	Ile	Asp	Gly				

290										295					300				
Ser	Thr	Ser	Ile	Gly	Lys	Arg	Arg	Phe	Arg	Ile	Gln	Lys	Gln	Leu					
				305					310					315					
Leu	Ala	Asp	Val	Ala	Gln	Ala	Leu	Asp	Ile	Gly	Pro	Ala	Gly	Pro					
				320					325					330					
Leu	Met	Gly	Val	Val	Gln	Tyr	Gly	Asp	Asn	Pro	Ala	Thr	His	Phe					
				335					340					345					
Asn	Leu	Lys	Thr	His	Thr	Asn	Ser	Arg	Asp	Leu	Lys	Thr	Ala	Ile					
				350					355					360					
Glu	Lys	Ile	Thr	Gln	Arg	Gly	Gly	Leu	Ser	Asn	Val	Gly	Arg	Ala					
				365					370					375					
Ile	Ser	Phe	Val	Thr	Lys	Asn	Phe	Phe	Ser	Lys	Ala	Asn	Gly	Asn					
				380					385					390					
Arg	Ser	Gly	Ala	Pro	Asn	Val	Val	Val	Val	Met	Val	Asp	Gly	Trp					
				395					400					405					
Pro	Thr	Asp	Lys	Val	Glu	Glu	Ala	Ser	Arg	Leu	Ala	Arg	Glu	Ser					
				410					415					420					
Gly	Ile	Asn	Ile	Phe	Phe	Ile	Thr	Ile	Glu	Gly	Ala	Ala	Glu	Asn					
				425					430					435					
Glu	Lys	Gln	Tyr	Val	Val	Glu	Pro	Asn	Phe	Ala	Asn	Lys	Ala	Val					
				440					445					450					
Cys	Arg	Thr	Asn	Gly	Phe	Tyr	Ser	Leu	His	Val	Gln	Ser	Trp	Phe					
				455					460					465					
Gly	Leu	His	Lys	Thr	Leu	Gln	Pro	Leu	Val	Lys	Arg	Val	Cys	Asp					
				470					475					480					
Thr	Asp	Arg	Leu	Ala	Cys	Ser	Lys	Thr	Cys	Leu	Asn	Ser	Ala	Asp					
				485					490					495					
Ile	Gly	Phe	Val	Ile	Asp	Gly	Ser	Ser	Ser	Val	Gly	Thr	Gly	Asn					
				500					505					510					
Phe	Arg	Thr	Val	Leu	Gln	Phe	Val	Thr	Asn	Leu	Thr	Lys	Glu	Phe					
				515					520					525					
Glu	Ile	Ser	Asp	Thr	Asp	Thr	Arg	Ile	Gly	Ala	Val	Gln	Tyr	Thr					
				530					535					540					
Tyr	Glu	Gln	Arg	Leu	Glu	Phe	Gly	Phe	Asp	Lys	Tyr	Ser	Ser	Lys					
				545					550					555					
Pro	Asp	Ile	Leu	Asn	Ala	Ile	Lys	Arg	Val	Gly	Tyr	Trp	Ser	Gly					
				560					565					570					
Gly	Thr	Ser	Thr	Gly	Ala	Ala	Ile	Asn	Phe	Ala	Leu	Glu	Gln	Leu					
				575					580					585					
Phe	Lys	Lys	Ser	Lys	Pro	Asn	Lys	Arg	Lys	Leu	Met	Ile	Leu	Ile					
				590					595					600					
Thr	Asp	Gly	Arg	Ser	Tyr	Asp	Asp	Val	Arg	Ile	Pro	Ala	Met	Ala					

605	610	615
Ala His Leu Lys Gly Val Ile Thr Tyr	Ala Ile Gly Val Ala Trp	
620	625	630
Ala Ala Gln Glu Glu Leu Glu Val Ile	Ala Thr His Pro Ala Arg	
635	640	645
Asp His Ser Phe Phe Val Asp Glu Phe	Asp Asn Leu His Gln Tyr	
650	655	660
Val Pro Arg Ile Ile Gln Asn Ile Cys	Thr Glu Phe Asn Ser Gln	
665	670	675
Pro Arg Asn		

<210> 180
 <211> 1759
 <212> DNA
 <213> Homo sapiens

<400> 180
 caggatgaac tggttgcagt ggctgctgct gctgcggggg cgctgagagg 50
 acacgagctc tatgcctttc cggctgctca tcccgcctgg cctcctgtgc 100
 gcgctgctgc ctacgaccca tgggtgcgcca ggtcccgcag gctccgcgcc 150
 agatcccgcc cactacagtt tttctctgac tctaattgat gcaactggaca 200
 ccttgctgat tttggggaat gtctcagaat tccaaagagt ggttgaagtg 250
 ctccaggaca gcgtggactt tgatattgat gtgaacgcct ctgtgtttga 300
 aacaaacatt cgagtggtag gaggactcct gtctgctcat ctgctctcca 350
 agaaggctgg ggtggaagta gaggctggat ggccctgttc cgggcctctc 400
 ctgagaatgg ctgaggaggc ggcccgaata ctctcccag cctttcagac 450
 cccactggc atgccatatg gaacagtga cttacttcat ggcgtgaacc 500
 caggagagac ccctgtcacc tgtacggcag ggattgggac cttcattgtt 550
 gaatttgcca ccctgagcag cctcactggt gaccggtgt tcgaagatgt 600
 ggccagagtg gctttgatgc gcctctggga gagccggtca gatatcgggc 650
 tggtcggcaa ccacattgat gtgctcactg gcaagtgggt ggcccaggac 700
 gcaggcatcg gggctggcgt ggactcctac tttgagtact tggtgaaagg 750
 agccatcctg cttcaggata agaagctcat ggccatgttc ctagagtata 800
 acaaagccat ccggaactac acccgcttcg atgactggta cctgtggggt 850
 cagatgtaca aggggactgt gtccatgccca gtcttccagt ccttgagggc 900
 ctactggcct ggtcttcaga gcctcattgg agacattgac aatgccatga 950
 ggaccttcct caactactac actgtatgga agcagtttgg ggggctcccg 1000

gaattctaca acattcctca gggatacaca gtggagaagc gagagggcta 1050
 cccacttcgg ccagaactta ttgaaagcgc aatgtacctc taccgtgccca 1100
 cgggggatcc caccctccta gaactcggaa gagatgctgt ggaatccatt 1150
 gaaaaaatca gcaaggtgga gtgcggattt gcaacaatca aagatctgcg 1200
 agaccacaag ctggacaacc gcatggagtc gttcttcctg gccgagactg 1250
 tgaaatacct ctacctcctg tttgacccaa ccaacttcat ccacaacaat 1300
 ggggtccacct tcgacgcggg gatcaccccc tatggggagt gcatoctggg 1350
 ggctgggggg tacatcttca acacagaagc tcaccccatc gaccttgccg 1400
 ccctgcactg ctgccagagg ctgaaggaag agcagtggga ggtggaggac 1450
 ttgatgaggg aattctactc tctcaaacgg agcaggtcga aatttcagaa 1500
 aaacactgtt agttcggggc catgggaacc tccagcaagg ccaggaacac 1550
 tcttctcacc agaaaacat gaccaggcaa gggagaggaa gcctgccaaa 1600
 cagaaggtcc cacttctcag ctgccccagt cagcccttca cctccaagtt 1650
 ggcattactg ggacaggttt tcctagactc ctcataacca ctggataatt 1700
 tttttatattt tatttttttg aggctaaact ataataaatt gcttttggct 1750
 atcataaaa 1759

<210> 181
 <211> 541
 <212> PRT
 <213> Homo sapiens

<400> 181
 Met Pro Phe Arg Leu Leu Ile Pro Leu Gly Leu Leu Cys Ala Leu
 1 5 10 15
 Leu Pro Gln His His Gly Ala Pro Gly Pro Asp Gly Ser Ala Pro
 20 25 30
 Asp Pro Ala His Tyr Ser Phe Ser Leu Thr Leu Ile Asp Ala Leu
 35 40 45
 Asp Thr Leu Leu Ile Leu Gly Asn Val Ser Glu Phe Gln Arg Val
 50 55 60
 Val Glu Val Leu Gln Asp Ser Val Asp Phe Asp Ile Asp Val Asn
 65 70 75
 Ala Ser Val Phe Glu Thr Asn Ile Arg Val Val Gly Gly Leu Leu
 80 85 90
 Ser Ala His Leu Leu Ser Lys Lys Ala Gly Val Glu Val Glu Ala
 95 100 105
 Gly Trp Pro Cys Ser Gly Pro Leu Leu Arg Met Ala Glu Glu Ala
 110 115 120
 Ala Arg Lys Leu Leu Pro Ala Phe Gln Thr Pro Thr Gly Met Pro

125										130					135				
Tyr	Gly	Thr	Val	Asn	Leu	Leu	His	Gly	Val	Asn	Pro	Gly	Glu	Thr					
				140					145					150					
Pro	Val	Thr	Cys	Thr	Ala	Gly	Ile	Gly	Thr	Phe	Ile	Val	Glu	Phe					
				155					160					165					
Ala	Thr	Leu	Ser	Ser	Leu	Thr	Gly	Asp	Pro	Val	Phe	Glu	Asp	Val					
				170					175					180					
Ala	Arg	Val	Ala	Leu	Met	Arg	Leu	Trp	Glu	Ser	Arg	Ser	Asp	Ile					
				185					190					195					
Gly	Leu	Val	Gly	Asn	His	Ile	Asp	Val	Leu	Thr	Gly	Lys	Trp	Val					
				200					205					210					
Ala	Gln	Asp	Ala	Gly	Ile	Gly	Ala	Gly	Val	Asp	Ser	Tyr	Phe	Glu					
				215					220					225					
Tyr	Leu	Val	Lys	Gly	Ala	Ile	Leu	Leu	Gln	Asp	Lys	Lys	Leu	Met					
				230					235					240					
Ala	Met	Phe	Leu	Glu	Tyr	Asn	Lys	Ala	Ile	Arg	Asn	Tyr	Thr	Arg					
				245					250					255					
Phe	Asp	Asp	Trp	Tyr	Leu	Trp	Val	Gln	Met	Tyr	Lys	Gly	Thr	Val					
				260					265					270					
Ser	Met	Pro	Val	Phe	Gln	Ser	Leu	Glu	Ala	Tyr	Trp	Pro	Gly	Leu					
				275					280					285					
Gln	Ser	Leu	Ile	Gly	Asp	Ile	Asp	Asn	Ala	Met	Arg	Thr	Phe	Leu					
				290					295					300					
Asn	Tyr	Tyr	Thr	Val	Trp	Lys	Gln	Phe	Gly	Gly	Leu	Pro	Glu	Phe					
				305					310					315					
Tyr	Asn	Ile	Pro	Gln	Gly	Tyr	Thr	Val	Glu	Lys	Arg	Glu	Gly	Tyr					
				320					325					330					
Pro	Leu	Arg	Pro	Glu	Leu	Ile	Glu	Ser	Ala	Met	Tyr	Leu	Tyr	Arg					
				335					340					345					
Ala	Thr	Gly	Asp	Pro	Thr	Leu	Leu	Glu	Leu	Gly	Arg	Asp	Ala	Val					
				350					355					360					
Glu	Ser	Ile	Glu	Lys	Ile	Ser	Lys	Val	Glu	Cys	Gly	Phe	Ala	Thr					
				365					370					375					
Ile	Lys	Asp	Leu	Arg	Asp	His	Lys	Leu	Asp	Asn	Arg	Met	Glu	Ser					
				380					385					390					
Phe	Phe	Leu	Ala	Glu	Thr	Val	Lys	Tyr	Leu	Tyr	Leu	Leu	Phe	Asp					
				395					400					405					
Pro	Thr	Asn	Phe	Ile	His	Asn	Asn	Gly	Ser	Thr	Phe	Asp	Ala	Val					
				410					415					420					
Ile	Thr	Pro	Tyr	Gly	Glu	Cys	Ile	Leu	Gly	Ala	Gly	Gly	Tyr	Ile					
				425					430					435					
Phe	Asn	Thr	Glu	Ala	His	Pro	Ile	Asp	Leu	Ala	Ala	Leu	His	Cys					

	440		445		450
Cys Gln Arg Leu	Lys Glu Glu Gln Trp	Glu Val Glu Asp Leu	Met		
	455	460	465		
Arg Glu Phe Tyr	Ser Leu Lys Arg Ser	Arg Ser Lys Phe Gln	Lys		
	470	475	480		
Asn Thr Val Ser	Ser Gly Pro Trp Glu	Pro Pro Ala Arg Pro	Gly		
	485	490	495		
Thr Leu Phe Ser	Pro Glu Asn His Asp	Gln Ala Arg Glu Arg	Lys		
	500	505	510		
Pro Ala Lys Gln	Lys Val Pro Leu Leu	Ser Cys Pro Ser Gln	Pro		
	515	520	525		
Phe Thr Ser Lys	Leu Ala Leu Leu Gly	Gln Val Phe Leu Asp	Ser		
	530	535	540		

Ser

<210> 182
 <211> 2056
 <212> DNA
 <213> Homo sapiens

<400> 182
 aaagttacat tttctctgga actctcctag gccactccct gctgatgcaa 50
 catctggggtt tgggcagaaa ggaggggtgt tggagcccg ccctttctga 100
 gcttcctggg ccggtcttag aacaattcag gcttcgctgc gactcagacc 150
 tcagctccaa catatgcatt ctgaagaaag atggctgaga tggacagaat 200
 gctttatttt ggaaagaaac aatgttctag gtcaaactga gtctaccaa 250
 tgcagacttt cacaatgggt ctagaagaaa tctggacaag tcttttcatg 300
 tgggtttttct acgcattgat tccatgtttg ctcacagatg aagtggccat 350
 tctgcctgcc cctcagaacc tctctgtact ctcaaccaac atgaagcatc 400
 tottgatgtg gagcccagtg atcgcgctg gagaaacagt gtactattct 450
 gtogaatacc agggggagta cgagagcctg tacacgagcc acatctggat 500
 cccagcagc tgggtgtcac tcaactgaagg tcttgagtgt gatgtcactg 550
 atgacatcac ggccactgtg ccatacaacc ttcgtgtcag ggccacattg 600
 gggtcacaga cctcagcctg gagcatcctg aagcatccct ttaatagaaa 650
 ctcaaccatc cttacccgac ctgggatgga gatcaccaaa gatggcttcc 700
 acctgggttat tgagctggag gacctggggc ccagtttga gttccttggtg 750
 gcctactgga ggagggagcc tggtgccgag gaacatgtca aaatggtgag 800
 gagtgggggt attccagtgc acctagaaac catggagcca ggggctgcat 850

actgtgtgaa ggcccagaca ttctgtgaagg ccattgggag gtacagcgcc 900
 ttcagccaga cagaatgtgt ggaggtgcaa ggagaggcca ttcccctggt 950
 actggccctg tttgcctttg ttggcttcat gctgattcctt gtggctcgtgc 1000
 cactgttctgt ctggaaaatg ggccggctgc tccagtactc ctgttgcccc 1050
 gtgggtggtcc tcccagacac cttgaaaata accaattcac cccagaagtt 1100
 aatcagctgc agaagggagg aggtggatgc ctgtgccacg gctgtgatgt 1150
 ctctgagga actcctcagg gcctggatct cataggtttg cggaagggcc 1200
 caggatgaagc cgagaacctg gtctgcatga catggaaacc atgaggggac 1250
 aagttgtgtt tctgttttcc gccacggaca agggatgaga gaagtaggaa 1300
 gagcctgttg tctacaagtc tagaagcaac catcagaggc aggggtggttt 1350
 gtctaacaga aactgactg aggccttaggg gatgtgacct ctagactggg 1400
 ggctgccact tgctggctga gcaaccctgg gaaaagtgc ttcattccctt 1450
 cggctctaag ttttctcatt tgtaatgggg gaattacct caccctgct 1500
 aaacacacac acacagagtc tctctctata tatacacacg tacacataaa 1550
 tacaccagc atttgcaagg ctagaggga actggtgaca ctctacagtc 1600
 tgactgattc agtgtttctg gagagcagga cataaatgta tgatgagaat 1650
 gatcaaggac tctacacact ggggtggcttg gagagccac tttcccagaa 1700
 taatccttga gagaaaagga atcatgggag caatggtgtt gagttcactt 1750
 caagcccaat gccggtgcag aggggaatgg cttagcgagc tctacagtag 1800
 gtgacctgga ggaaggtcac agccacactg aaaatgggat gtgcatgaac 1850
 acggaggatc catgaactac tgtaaagtgt tgacagtgtg tgcacactgc 1900
 agacagcagg tgaaatgtat gtgtgcaatg cgacgagaat gcagaagtca 1950
 gtaacatgtg catgtttgtt gtgctccttt tttctgttgg taaagtacag 2000
 aattcagcaa ataaaaaggg ccaccctggc caaaagcggg aaaaaaaaaa 2050
 aaaaaa 2056

<210> 183
 <211> 311
 <212> PRT
 <213> Homo sapiens

<220>
 <221> Signal peptide
 <222> 1-29
 <223> Signal peptide

<220>
 <221> N-glycosylation sites
 <222> 40-43, 134-137

<223> N-glycosylation sites.

<220>

<221> Tissue factor proteins homology

<222> 92-119

<223> Tissue factor proteins homology

<220>

<221> Transmembrane domain

<222> 230-255

<223> Transmembrane domain

<220>

<221> Integrins alpha chain protein homology

<222> 232-262

<223> Integrins alpha chain protein homology

<400> 183

Met	Gln	Thr	Phe	Thr	Met	Val	Leu	Glu	Glu	Ile	Trp	Thr	Ser	Leu	
1				5					10					15	
Phe	Met	Trp	Phe	Phe	Tyr	Ala	Leu	Ile	Pro	Cys	Leu	Leu	Thr	Asp	
				20					25					30	
Glu	Val	Ala	Ile	Leu	Pro	Ala	Pro	Gln	Asn	Leu	Ser	Val	Leu	Ser	
				35					40					45	
Thr	Asn	Met	Lys	His	Leu	Leu	Met	Trp	Ser	Pro	Val	Ile	Ala	Pro	
				50					55					60	
Gly	Glu	Thr	Val	Tyr	Tyr	Ser	Val	Glu	Tyr	Gln	Gly	Glu	Tyr	Glu	
				65					70					75	
Ser	Leu	Tyr	Thr	Ser	His	Ile	Trp	Ile	Pro	Ser	Ser	Trp	Cys	Ser	
				80					85					90	
Leu	Thr	Glu	Gly	Pro	Glu	Cys	Asp	Val	Thr	Asp	Asp	Ile	Thr	Ala	
				95					100					105	
Thr	Val	Pro	Tyr	Asn	Leu	Arg	Val	Arg	Ala	Thr	Leu	Gly	Ser	Gln	
				110					115					120	
Thr	Ser	Ala	Trp	Ser	Ile	Leu	Lys	His	Pro	Phe	Asn	Arg	Asn	Ser	
				125					130					135	
Thr	Ile	Leu	Thr	Arg	Pro	Gly	Met	Glu	Ile	Thr	Lys	Asp	Gly	Phe	
				140					145					150	
His	Leu	Val	Ile	Glu	Leu	Glu	Asp	Leu	Gly	Pro	Gln	Phe	Glu	Phe	
				155					160					165	
Leu	Val	Ala	Tyr	Trp	Arg	Arg	Glu	Pro	Gly	Ala	Glu	Glu	His	Val	
				170					175					180	
Lys	Met	Val	Arg	Ser	Gly	Gly	Ile	Pro	Val	His	Leu	Glu	Thr	Met	
				185					190					195	
Glu	Pro	Gly	Ala	Ala	Tyr	Cys	Val	Lys	Ala	Gln	Thr	Phe	Val	Lys	
				200					205					210	
Ala	Ile	Gly	Arg	Tyr	Ser	Ala	Phe	Ser	Gln	Thr	Glu	Cys	Val	Glu	
				215					220					225	

Val	Gln	Gly	Glu	Ala	Ile	Pro	Leu	Val	Leu	Ala	Leu	Phe	Ala	Phe	
				230					235					240	
Val	Gly	Phe	Met	Leu	Ile	Leu	Val	Val	Val	Pro	Leu	Phe	Val	Trp	
				245					250					255	
Lys	Met	Gly	Arg	Leu	Leu	Gln	Tyr	Ser	Cys	Cys	Pro	Val	Val	Val	
				260					265					270	
Leu	Pro	Asp	Thr	Leu	Lys	Ile	Thr	Asn	Ser	Pro	Gln	Lys	Leu	Ile	
				275					280					285	
Ser	Cys	Arg	Arg	Glu	Glu	Val	Asp	Ala	Cys	Ala	Thr	Ala	Val	Met	
				290					295					300	
Ser	Pro	Glu	Glu	Leu	Leu	Arg	Ala	Trp	Ile	Ser					
				305					310						

<210> 184
 <211> 808
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 654, 711, 748
 <223> unknown base

<400> 184
 tcctgctgat gcacatctgg gtttggcaaa aggaggttgc ttcgagccgc 50
 cctttctagc ttcctggccg gctctagaac aattcaggct tcgctgcgac 100
 tagacctcag ctccaacata tgcattctga agaaagatgg ctgagatgac 150
 agaatgcttt attttggaaa gaaacaatgt tctaggtcaa actgagtcta 200
 ccaaatgcag actttcacia tggttctaga agaaatctgg acaagtcttt 250
 tcattgtggtt tttctacgca ttgattccat gtttgctcac agatgaagtg 300
 gccattctgc ctgcccctca gaacctctct gtactctcaa ccaacatgaa 350
 gcattctcttg atgtggagcc cagtgatcgc gcctggagaa acagtgtact 400
 attctgtoga ataccagggg gagtacgaga gcctgtacac gagccacatc 450
 tggatcccca gcagctggtg ctcaactcact gaaggtcctg agtgtgatgt 500
 cactgatgac atcacggcca ctgtgccata caacctttgt gtcaggggcca 550
 cattgggctc acagacctca gcctggagca tcctgaagca tccctttaat 600
 agaaactcaa ccatocttac ccgacctggg atggagatca ccaaagatgg 650
 cttncacctg gttattgagc tggaggacct ggggccccag tttgagttcc 700
 ttgtggccta ntggaggagg ggccaacccc ttgcggcgca aggggttngc 750
 gaacctcttg cggccgctgg ggtatctctc gagaaaagag aggcccaata 800
 tgacctcac 808

<210> 185
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 185
aggcttcgct gcgactagac ctc 23

<210> 186
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 186
ccaggtcggg taaggatggg tgag 24

<210> 187
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 187
tttctacgca ttgattccat gtttgctcac agatgaagtg gccattctgc 50

<210> 188
<211> 1227
<212> DNA
<213> Homo sapiens

<400> 188
cgacgcgtg ggccgccacc tccggaacaa gccatgggtg cgccgacggt 50
ggcagcggcg tggctgctcc tgtgggctgc ggcctgcgcg cagcaggagc 100
aggacttcta cgacttcaag gcggtcaaca tccggggcaa actggtgtcg 150
ctggagaagt accgcggatc ggtgtccctg gtggtgaatg tggccagcga 200
gtgcggcttc acagaccagc actaccgagc cctgcagcag ctgcagcgag 250
acctggggccc ccaccacttt aacgtgctcg cttcccctg caaccagttt 300
ggccaacagg agcctgacag caacaaggag attgagagct ttgcccgccg 350
cacctacagt gtctcattcc ccatgtttag caagattgca gtcaccgta 400
ctgggtgcca tcctgccttc aagtacctgg cccagacttc tgggaaggag 450
cccacctgga acttctggaa gtacctagta gcccagatg gaaaggtggt 500
aggggcttgg gacccaactg tgtcagtgga ggaggtcaga ccccagatca 550
cagcgctcgt gaggaagctc atcctactga agcgagaaga cttataacca 600

ccgcgtctcc tctccacca cctcatcccg cccacctgtg tggggctgac 650
 caatgcaaac tcaaattggtg cttcaaaggg agagaccac tgactctcct 700
 tcctttactc ttatgccatt ggtcccatca ttcttgtggg ggaaaaattc 750
 tagtattttg attatttgaa tcttacagca acaaatagga actcctggcc 800
 aatgagagct cttgaccagt gaatcaccag ccgatacgaa cgtcttgcca 850
 acaaaaatgt gtggcaaata gaagtatatc aagcaataat ctcccacca 900
 aggcttctgt aaactgggac caatgattac ctcatagggc tgttgtgagg 950
 attaggatga aatacctgtg aaagtgccta ggcagtgccg gccaaatagg 1000
 aggcattcaa tgaacatttt ttgcatataa accaaaaaat aacttgttat 1050
 caataaaaac ttgcatccaa catgaatttc cagccgatga taatccaggc 1100
 caaaggttta gttgttgta tttcctctgt attattttct tcattacaaa 1150
 agaaatgcaa gttcattgta acaatccaaa caatacctca cgatataaaa 1200
 taaaaatgaa agtatcctcc tcaaaaa 1227

<210> 189
 <211> 187
 <212> PRT
 <213> Homo sapiens

<400> 189
 Met Val Ala Ala Thr Val Ala Ala Ala Trp Leu Leu Leu Trp Ala
 1 5 10 15
 Ala Ala Cys Ala Gln Gln Glu Gln Asp Phe Tyr Asp Phe Lys Ala
 20 25 30
 Val Asn Ile Arg Gly Lys Leu Val Ser Leu Glu Lys Tyr Arg Gly
 35 40 45
 Ser Val Ser Leu Val Val Asn Val Ala Ser Glu Cys Gly Phe Thr
 50 55 60
 Asp Gln His Tyr Arg Ala Leu Gln Gln Leu Gln Arg Asp Leu Gly
 65 70 75
 Pro His His Phe Asn Val Leu Ala Phe Pro Cys Asn Gln Phe Gly
 80 85 90
 Gln Gln Glu Pro Asp Ser Asn Lys Glu Ile Glu Ser Phe Ala Arg
 95 100 105
 Arg Thr Tyr Ser Val Ser Phe Pro Met Phe Ser Lys Ile Ala Val
 110 115 120
 Thr Gly Thr Gly Ala His Pro Ala Phe Lys Tyr Leu Ala Gln Thr
 125 130 135
 Ser Gly Lys Glu Pro Thr Trp Asn Phe Trp Lys Tyr Leu Val Ala
 140 145 150
 Pro Asp Gly Lys Val Val Gly Ala Trp Asp Pro Thr Val Ser Val

	155	160	165
Glu Glu Val Arg	Pro Gln Ile Thr Ala	Leu Val Arg Lys Leu	Ile
	170	175	180
Leu Leu Lys Arg	Glu Asp Leu		
	185		

<210> 190
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 190
 gcaggacttc tacgacttca aggc 24

<210> 191
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 191
 agtctggggcc aggtacttga aggc 24

<210> 192
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 192
 caacatccgg ggcaaactgg tgtcgtgga gaagtaccgc ggatcgggtgt 50

<210> 193
 <211> 2187
 <212> DNA
 <213> Homo sapiens

<400> 193
 cggacgcgtg ggcggggccgg gacgcagggc aaagcgagcc atggctgtct 50
 acgtcgggat gctgcgcctg gggaggctgt gcgccgggag ctggggggtg 100
 ctggggggccc gggcgcacct ctctcgaggt tggcaggaag ccaggttgca 150
 ggggtgtccgc ttcctcagtt ccagagaggt ggatcgcatt gtctccacgc 200
 ccatcggagg cctcagctac gttcaggggt gcacaaaaaa gcatcttaac 250
 agcaagactg tgggccagtg cctggagacc acagcacaga gggcccaga 300
 acgagaggcc ttggctcgtcc tccatgaaga cgtcaggttg acctttgccc 350
 aactcaagga ggaggtggac aaagctgctt ctggcctcct gagcattggc 400

ctctgcaaag gtgaccggct gggcatgtgg ggacctaact cctatgcatg 450
ggtgctcatg cagttggcca ccgcccaggc gggcatcatt ctggtgtctg 500
tgaaccacagc ctaccaggct atggaactgg agtatgtcct caagaagggtg 550
ggctgcaagg cccttgtgtt cccaagcaa ttcaagacct agcaatacta 600
caacgtcctg aagcagatct gtccagaagt ggagaatgcc cagccagggg 650
ccttgaagag tcagaggctc ccagatctga ccacagtcac ctcggtggat 700
gcccctttgc cggggaccct gtcctggat gaagtgggtg cggctggcag 750
cacacggcag catctggacc agtccaata caaccagcag ttcctgtcct 800
gccatgacct catcaacatc cagttcacct cggggacaac aggcagcccc 850
aagggggcca ccctctccca ctacaacatt gtcaacaact ccaacatttt 900
aggagagcgc ctgaaactgc atgagaagac accagagcag ttgcggatga 950
tcctgccccaa cccctgtac cattgcctgg gttccgtggc aggcacaatg 1000
atgtgtctga tgtacgggtg caccctcatc ctggcctctc ccatcttcaa 1050
tggcaagaag gactggagg ccatcagcag agagagaggc accttctgt 1100
atggtacccc cacgatgttc gtggacattc tgaaccagcc agacttctcc 1150
agttatgaca tctcgaccat gtgtggaggt gtcattgctg ggtccctgc 1200
acctccagag ttgatccgag ccatcatcaa caagataaat atgaaggacc 1250
tgggtggttg ttatggaacc acagagaaca gtcccgtagc attcgcgac 1300
ttccctgagg aactgtgga gcagaaggca gaaagcgtgg gcagaattat 1350
gcctcacacg gaggcccga tcatgaacat ggaggcaggg acgctggcaa 1400
agctgaacac gcccgggag ctgtgcatcc gaggtactg cgtcatgctg 1450
ggctactggg gtgagcctca gaagacagag gaagcagtgg atcaggacaa 1500
gtggtattgg acaggagatg tcgccacaat gaatgagcag ggcttctgca 1550
agatcgtggg ccgctctaag gatatgatca tccgggtgg tgagaacatc 1600
taccgcgag agctcgagga cttctttcac acacaccoga aggtgcagga 1650
agtgcaggtg gtgggagtga aggacgatcg gatgggggaa gagatttgtg 1700
cctgcattcg gctgaaggac ggggaggaga ccacgtgga ggagataaaa 1750
gctttctgca aagggaagat ctctcacttc aagattccga agtacatcgt 1800
gtttgtcaca aactaccccc tcaccatttc aggaaagatc cagaaattca 1850
aacttcgaga gcagatggaa cgacatctaa atctgtgaat aaagcagcag 1900
gcctgtcctg gccggttggc ttgactctct cctgtcagaa tgcaacctgg 1950
ctttatgcac ctagatgtcc ccagcaccca gttctgagcc aggcacatca 2000

aatgtcaagg aattgactga acgaactaag agctcctgga tgggtccggg 2050
aactgcctg ggcacaaggt gccaaaaggc aggagcctg cccaggccct 2100
ccctcctgtc catccccac attccctgt ctgtccttgt gatttggcat 2150
aaagagcttc tgttttcttt gaaaaaaaaa aaaaaaa 2187

<210> 194
<211> 615
<212> PRT
<213> Homo sapiens

<400> 194
Met Ala Val Tyr Val Gly Met Leu Arg Leu Gly Arg Leu Cys Ala
1 5 10 15
Gly Ser Ser Gly Val Leu Gly Ala Arg Ala Ala Leu Ser Arg Ser
20 25 30
Trp Gln Glu Ala Arg Leu Gln Gly Val Arg Phe Leu Ser Ser Arg
35 40 45
Glu Val Asp Arg Met Val Ser Thr Pro Ile Gly Gly Leu Ser Tyr
50 55 60
Val Gln Gly Cys Thr Lys Lys His Leu Asn Ser Lys Thr Val Gly
65 70 75
Gln Cys Leu Glu Thr Thr Ala Gln Arg Val Pro Glu Arg Glu Ala
80 85 90
Leu Val Val Leu His Glu Asp Val Arg Leu Thr Phe Ala Gln Leu
95 100 105
Lys Glu Glu Val Asp Lys Ala Ala Ser Gly Leu Leu Ser Ile Gly
110 115 120
Leu Cys Lys Gly Asp Arg Leu Gly Met Trp Gly Pro Asn Ser Tyr
125 130 135
Ala Trp Val Leu Met Gln Leu Ala Thr Ala Gln Ala Gly Ile Ile
140 145 150
Leu Val Ser Val Asn Pro Ala Tyr Gln Ala Met Glu Leu Glu Tyr
155 160 165
Val Leu Lys Lys Val Gly Cys Lys Ala Leu Val Phe Pro Lys Gln
170 175 180
Phe Lys Thr Gln Gln Tyr Tyr Asn Val Leu Lys Gln Ile Cys Pro
185 190 195
Glu Val Glu Asn Ala Gln Pro Gly Ala Leu Lys Ser Gln Arg Leu
200 205 210
Pro Asp Leu Thr Thr Val Ile Ser Val Asp Ala Pro Leu Pro Gly
215 220 225
Thr Leu Leu Leu Asp Glu Val Val Ala Ala Gly Ser Thr Arg Gln
230 235 240
His Leu Asp Gln Leu Gln Tyr Asn Gln Gln Phe Leu Ser Cys His

245					250					255				
Asp	Pro	Ile	Asn	Ile	Gln	Phe	Thr	Ser	Gly	Thr	Thr	Gly	Ser	Pro
				260					265					270
Lys	Gly	Ala	Thr	Leu	Ser	His	Tyr	Asn	Ile	Val	Asn	Asn	Ser	Asn
				275					280					285
Ile	Leu	Gly	Glu	Arg	Leu	Lys	Leu	His	Glu	Lys	Thr	Pro	Glu	Gln
				290					295					300
Leu	Arg	Met	Ile	Leu	Pro	Asn	Pro	Leu	Tyr	His	Cys	Leu	Gly	Ser
				305					310					315
Val	Ala	Gly	Thr	Met	Met	Cys	Leu	Met	Tyr	Gly	Ala	Thr	Leu	Ile
				320					325					330
Leu	Ala	Ser	Pro	Ile	Phe	Asn	Gly	Lys	Lys	Ala	Leu	Glu	Ala	Ile
				335					340					345
Ser	Arg	Glu	Arg	Gly	Thr	Phe	Leu	Tyr	Gly	Thr	Pro	Thr	Met	Phe
				350					355					360
Val	Asp	Ile	Leu	Asn	Gln	Pro	Asp	Phe	Ser	Ser	Tyr	Asp	Ile	Ser
				365					370					375
Thr	Met	Cys	Gly	Gly	Val	Ile	Ala	Gly	Ser	Pro	Ala	Pro	Pro	Glu
				380					385					390
Leu	Ile	Arg	Ala	Ile	Ile	Asn	Lys	Ile	Asn	Met	Lys	Asp	Leu	Val
				395					400					405
Val	Ala	Tyr	Gly	Thr	Thr	Glu	Asn	Ser	Pro	Val	Thr	Phe	Ala	His
				410					415					420
Phe	Pro	Glu	Asp	Thr	Val	Glu	Gln	Lys	Ala	Glu	Ser	Val	Gly	Arg
				425					430					435
Ile	Met	Pro	His	Thr	Glu	Ala	Arg	Ile	Met	Asn	Met	Glu	Ala	Gly
				440					445					450
Thr	Leu	Ala	Lys	Leu	Asn	Thr	Pro	Gly	Glu	Leu	Cys	Ile	Arg	Gly
				455					460					465
Tyr	Cys	Val	Met	Leu	Gly	Tyr	Trp	Gly	Glu	Pro	Gln	Lys	Thr	Glu
				470					475					480
Glu	Ala	Val	Asp	Gln	Asp	Lys	Trp	Tyr	Trp	Thr	Gly	Asp	Val	Ala
				485					490					495
Thr	Met	Asn	Glu	Gln	Gly	Phe	Cys	Lys	Ile	Val	Gly	Arg	Ser	Lys
				500					505					510
Asp	Met	Ile	Ile	Arg	Gly	Gly	Glu	Asn	Ile	Tyr	Pro	Ala	Glu	Leu
				515					520					525
Glu	Asp	Phe	Phe	His	Thr	His	Pro	Lys	Val	Gln	Glu	Val	Gln	Val
				530					535					540
Val	Gly	Val	Lys	Asp	Asp	Arg	Met	Gly	Glu	Glu	Ile	Cys	Ala	Cys
				545					550					555
Ile	Arg	Leu	Lys	Asp	Gly	Glu	Glu	Thr	Thr	Val	Glu	Glu	Ile	Lys

560	565	570
Ala Phe Cys Lys Gly Lys Ile Ser His	Phe Lys Ile Pro Lys Tyr	
575	580	585
Ile Val Phe Val Thr Asn Tyr Pro Leu	Thr Ile Ser Gly Lys Ile	
590	595	600
Gln Lys Phe Lys Leu Arg Glu Gln Met	Glu Arg His Leu Asn Leu	
605	610	615

<210> 195
 <211> 642
 <212> DNA
 <213> Homo sapiens

<400> 195
 caactccaac attttaggag agcgctgaa actgcatgag aagacaccag 50
 agcagttgcg gatgatectg cccaaccccc tgtaccattg cctgggttcc 100
 gtggcaggca caatgatgtg tctgatgtac ggtgccaccc tcatcctggc 150
 ctctcccatc ttcaatggca agaaggcact ggaggccatc agcagagaga 200
 gaggcacctt cctgtatggt acccccacga tgttcgtgga cattctgaac 250
 cagccagact tctccagtta tgacatctcg accatgtgtg gaggtgtcat 300
 tgctgggtcc cctgcacctc cagagttgat ccgagccatc atcaacaaga 350
 taaatatgaa ggacctggtg gttgcttatg gaaccacaga gaacagtccc 400
 gtgacattcg cgcacttccc tgaggacact gtggagcaga aggcagaaag 450
 cgtgggcaga attatgcctc acacggaggc gcggatcatg aacatggagg 500
 cagggacgct ggcaaagctg aacacgcccc gggagctgtg catccgaggg 550
 tactgctca tgctgggcta ctggggtgag cctcagaaga cagaggaagc 600
 agtggatcag gacaagtggg attggacagg agatgtcgcc ac 642

<210> 196
 <211> 1575
 <212> DNA
 <213> Homo sapiens

<400> 196
 gagcaggacg gagccatgga ccccgccagg aaagcaggtg ccaggccat 50
 gatctggact gcaggtggc tgctgctgct gctgcttcgc ggaggagcgc 100
 aggccctgga gtgctacagc tgcgtgcaga aagcagatga cggatgctcc 150
 ccgaacaaga tgaagacagt gaagtgcgcg ccgggctgtg acgtctgcac 200
 cgaggccgtg ggggcggttg agaccatcca cggacaattc tcgctggcag 250
 tgcgggggttg cggttcggga ctccccggca agaataaccg cggcctggat 300
 cttcacgggc ttctggcggt catccagctg cagcaatgcg ctcaggatcg 350

ctgcaacgcc aagctcaacc tcacctcgcg ggcgctcgac ccggcaggta 400
 atgagagtgc ataccgccc aacggcgtgg agtgctacag ctgtgtgggc 450
 ctgagccggg aggcgtgcc gggtagatcg ccgcccgtcg tgagctgcta 500
 caacgccagc gatcatgtct acaagggctg cttcgacggc aacgtcacct 550
 tgacggcagc taatgtgact gtgtccttgc ctgtccgggg ctgtgtccag 600
 gatgaattct gcaactcgga tggagtaaca ggcccagggt tcacgctcag 650
 tggctcctgt tgccaggggt cccgctgtaa ctctgacctc cgcaacaaga 700
 cctacttctc ccctcgaatc ccacccttg tccggtgcc ccctccagag 750
 cccacgactg tggcctcaac cacatctgtc accacttcta cctcgcccc 800
 agtgagaccc acatccacca ccaaaccat gccagcgcca accagtcaga 850
 ctccgagaca gggagtagaa cacgaggcct cccgggatga ggagcccagg 900
 ttgactggag gcgcccgtgg ccaccaggac cgcagcaatt cagggcagta 950
 tcctgcaaaa ggggggcccc agcagcccca taataaaggc tgtgtggctc 1000
 ccacagctgg attggcagcc cttctgttgg ccgtggctgc tgggtgtccta 1050
 ctgtgagctt ctccacctgg aaatttccct ctcaactact tctctggccc 1100
 tgggtacccc tcttctcatc acttctgtt cccaccactg gactgggctg 1150
 gccagcccc tgtttttcca acattcccca gtatccccag cttctgctgc 1200
 gctggtttgc ggctttggga aataaaatac cgttgtatat attctgccag 1250
 ggggtgttcta gctttttgag gacagctcct gtatccttct catccttgtc 1300
 tctccgcttg tcctcttgtg atgttaggac agagtgagag aagtcagctg 1350
 tcacggggaa ggtgagagag aggatgctaa gcttctact cactttctcc 1400
 tagccagcct ggactttgga gcgtggggtg ggtgggacaa tggctcccca 1450
 ctctaagcac tgcctcccct actccccgca tctttgggga atcggttccc 1500
 catatgtctt ccttactaga ctgtgagctc ctcgaggggg ggcccgttac 1550
 ccaattcgcc ctatagttag tcgta 1575

<210> 197

<211> 346

<212> PRT

<213> Homo sapiens

<400> 197

Met Asp Pro Ala Arg Lys Ala Gly Ala Gln Ala Met Ile Trp Thr
 1 5 10 15

Ala Gly Trp Leu Leu Leu Leu Leu Leu Arg Gly Gly Ala Gln Ala
 20 25 30

Leu Glu Cys Tyr Ser Cys Val Gln Lys Ala Asp Asp Gly Cys Ser

35					40					45				
Pro	Asn	Lys	Met	Lys	Thr	Val	Lys	Cys	Ala	Pro	Gly	Val	Asp	Val
				50					55					60
Cys	Thr	Glu	Ala	Val	Gly	Ala	Val	Glu	Thr	Ile	His	Gly	Gln	Phe
				65					70					75
Ser	Leu	Ala	Val	Arg	Gly	Cys	Gly	Ser	Gly	Leu	Pro	Gly	Lys	Asn
				80					85					90
Asp	Arg	Gly	Leu	Asp	Leu	His	Gly	Leu	Leu	Ala	Phe	Ile	Gln	Leu
				95					100					105
Gln	Gln	Cys	Ala	Gln	Asp	Arg	Cys	Asn	Ala	Lys	Leu	Asn	Leu	Thr
				110					115					120
Ser	Arg	Ala	Leu	Asp	Pro	Ala	Gly	Asn	Glu	Ser	Ala	Tyr	Pro	Pro
				125					130					135
Asn	Gly	Val	Glu	Cys	Tyr	Ser	Cys	Val	Gly	Leu	Ser	Arg	Glu	Ala
				140					145					150
Cys	Gln	Gly	Thr	Ser	Pro	Pro	Val	Val	Ser	Cys	Tyr	Asn	Ala	Ser
				155					160					165
Asp	His	Val	Tyr	Lys	Gly	Cys	Phe	Asp	Gly	Asn	Val	Thr	Leu	Thr
				170					175					180
Ala	Ala	Asn	Val	Thr	Val	Ser	Leu	Pro	Val	Arg	Gly	Cys	Val	Gln
				185					190					195
Asp	Glu	Phe	Cys	Thr	Arg	Asp	Gly	Val	Thr	Gly	Pro	Gly	Phe	Thr
				200					205					210
Leu	Ser	Gly	Ser	Cys	Cys	Gln	Gly	Ser	Arg	Cys	Asn	Ser	Asp	Leu
				215					220					225
Arg	Asn	Lys	Thr	Tyr	Phe	Ser	Pro	Arg	Ile	Pro	Pro	Leu	Val	Arg
				230					235					240
Leu	Pro	Pro	Pro	Glu	Pro	Thr	Thr	Val	Ala	Ser	Thr	Thr	Ser	Val
				245					250					255
Thr	Thr	Ser	Thr	Ser	Ala	Pro	Val	Arg	Pro	Thr	Ser	Thr	Thr	Lys
				260					265					270
Pro	Met	Pro	Ala	Pro	Thr	Ser	Gln	Thr	Pro	Arg	Gln	Gly	Val	Glu
				275					280					285
His	Glu	Ala	Ser	Arg	Asp	Glu	Glu	Pro	Arg	Leu	Thr	Gly	Gly	Ala
				290					295					300
Ala	Gly	His	Gln	Asp	Arg	Ser	Asn	Ser	Gly	Gln	Tyr	Pro	Ala	Lys
				305					310					315
Gly	Gly	Pro	Gln	Gln	Pro	His	Asn	Lys	Gly	Cys	Val	Ala	Pro	Thr
				320					325					330
Ala	Gly	Leu	Ala	Ala	Leu	Leu	Leu	Ala	Val	Ala	Ala	Gly	Val	Leu
				335					340					345

Leu

<210> 198
<211> 1657
<212> DNA
<213> Homo sapiens

<400> 198
cgggactcgg cgggtcctcc tgggagtctc ggaggggacc ggctgtgcag 50
acgccatgga gttggtgctg gtcttcctct gcagcctgct ggcccccatg 100
gtcctggcca gtgcagctga aaaggagaag gaaatggacc cttttcatta 150
tgattaccag accctgagga ttgggggact ggtgttogct gtggtcctct 200
tctcggttgg gatcctcctt atcctaagtc gcagggtgcaa gtgcagtttc 250
aatcagaagc cccgggcccc aggagatgag gaagcccagg tggagaacct 300
catcacgcc aatgcaacag agccccagaa gcagagaact gaagtgcagc 350
catcagggtg aagcctctgg aacctgaggc ggctgcttga acctttggat 400
gcaaagtgcg atgcttaaga aaaccggcca cttcagcaac agccctttcc 450
ccaggagaag ccaagaactt gtgtgtcccc caccctatcc cctctaacac 500
cattcctcca cctgatgatg caactaacac ttgcctcccc actgcagcct 550
gcggtcctgc ccacctccc tgatgtgtgt gtgtgtgtgt gtgtgtgact 600
gtgtgtgttt gctaactgtg gtctttgtgg ctacttgttt gtggatggta 650
ttgtgtttgt tagtgaactg tggactcgtt ttcccaggca ggggctgagc 700
cacatggcca tctgtcctc cctgcccccg tggccctcca tcaccttctg 750
ctcctaggag gctgcttggt gcccgagacc agccccctcc cctgatttag 800
ggatgcgtag ggtaagagca cgggcagtgg tcttcagtcg tcttgggacc 850
tggaaggtt tgcagcactt tgtcatcatt cttcatggac tcctttcact 900
cctttaacaa aaaccttget tccttatccc acctgatccc agtctgaagg 950
tctcttagca actggagata caaagcaagg agctggtgag ccagcggtt 1000
acgtcaggca ggctatgcc ttccgtgggt aatttcttcc caggggcttc 1050
cacgaggagt ccccatctgc cccgcccctt cacagagcgc ccggggattc 1100
caggcccagg gcttctactc tgcccctggg gaatgtgtcc cctgcatatc 1150
ttctcagcaa taactocatg ggctctggga ccctaccct tccaaccttc 1200
cctgcttctg agacttcaat ctacagccca gctcatccag atgcagacta 1250
cagtcctgc aattgggtct ctggcaggca atagttgaag gactcctgtt 1300
ccgttggggc cagcacaccg ggatggatgg agggagagca gaggcctttg 1350
cttctctgcc tacgtcccct tagatgggca gcagaggcaa ctcccgcatc 1400

ctttgctctg cctgtcgggtg gtcagagcgg tgagcgaggt gggttggaga 1450
 ctcagcaggc tccgtgcagc ccttgggaac agtgagaggt tgaaggtcat 1500
 aacgagagtg ggaactcaac ccagatcccg cccctcctgt cctctgtgtt 1550
 cccgcggaaa ccaaccaaac cgtgogctgt gacccattgc tgttctctgt 1600
 atcgtgatct atcctcaaca acaacagaaa aaaggaataa aatatccttt 1650
 gtttcct 1657

<210> 199
 <211> 120
 <212> PRT
 <213> Homo sapiens

<400> 199
 Met Glu Leu Val Leu Val Phe Leu Cys Ser Leu Leu Ala Pro Met
 1 5 10 15
 Val Leu Ala Ser Ala Ala Glu Lys Glu Lys Glu Met Asp Pro Phe
 20 25 30
 His Tyr Asp Tyr Gln Thr Leu Arg Ile Gly Gly Leu Val Phe Ala
 35 40 45
 Val Val Leu Phe Ser Val Gly Ile Leu Leu Ile Leu Ser Arg Arg
 50 55 60
 Cys Lys Cys Ser Phe Asn Gln Lys Pro Arg Ala Pro Gly Asp Glu
 65 70 75
 Glu Ala Gln Val Glu Asn Leu Ile Thr Ala Asn Ala Thr Glu Pro
 80 85 90
 Gln Lys Gln Arg Thr Glu Val Gln Pro Ser Gly Gly Ser Leu Trp
 95 100 105
 Asn Leu Arg Arg Leu Leu Glu Pro Leu Asp Ala Asn Val Asp Ala
 110 115 120

<210> 200
 <211> 415
 <212> DNA
 <213> Homo sapiens

<400> 200
 aaacttgacg ccatgaagat cccggtcctt cctgccgtgg tgctcctctc 50
 cctcctgggtg ctccactctg ccaggggagc caccctgggt ggtcctgagg 100
 aagaaagcac cattgagaat tatgcgtcac gacccgaggc ctttaacacc 150
 ccgttctctga acatcgacaa attgcgatct gcgtttaagg ctgatgagtt 200
 cctgaactgg cagccctctt ttgagtctat caaaaggaaa cttcctttcc 250
 tcaactggga tgcccttctt aagctgaaag gactgaggag cgcaactcct 300
 gatgcccagt gaccatgacc tccactggaa gagggggcta gcgtgagcgc 350
 tgattctcaa cctaccataa ctctttcctg cctcaggaac tccaataaaa 400

cattttccat ccaaa 415

<210> 201

<211> 99

<212> PRT

<213> Homo sapiens

<400> 201

Met	Lys	Ile	Pro	Val	Leu	Pro	Ala	Val	Val	Leu	Leu	Ser	Leu	Leu
1				5					10					15
Val	Leu	His	Ser	Ala	Gln	Gly	Ala	Thr	Leu	Gly	Gly	Pro	Glu	Glu
				20					25					30
Glu	Ser	Thr	Ile	Glu	Asn	Tyr	Ala	Ser	Arg	Pro	Glu	Ala	Phe	Asn
				35					40					45
Thr	Pro	Phe	Leu	Asn	Ile	Asp	Lys	Leu	Arg	Ser	Ala	Phe	Lys	Ala
				50					55					60
Asp	Glu	Phe	Leu	Asn	Trp	His	Ala	Leu	Phe	Glu	Ser	Ile	Lys	Arg
				65					70					75
Lys	Leu	Pro	Phe	Leu	Asn	Trp	Asp	Ala	Phe	Pro	Lys	Leu	Lys	Gly
				80					85					90
Leu	Arg	Ser	Ala	Thr	Pro	Asp	Ala	Gln						
				95										

<210> 202

<211> 678

<212> DNA

<213> Homo sapiens

<400> 202

cagttctgaa atcaatggag ttaatttagg gaatacaaac cagccatggg 50
ggtggagatt gcctttgcct cagtgattct cacctgcctc tcccttctgg 100
cagcaggagt ctcccagggt gttctttctcc agccagttcc aactcaggag 150
acagggtccca aggccatggg agatctctcc tgtggctttg ccggccactc 200
atgagagtgt ttttgtgtaa agtatttttt agaatactgt tgacttcttc 250
atgatttaat aaccatcctt tgcgaagttt tatgaggctt taggggaatg 300
tcaaccctca aatttttggt atactagatg gcttccattt acccaccact 350
attttaaggt ccctttatct ttaggttcaa ggttcatttg acttgagaaa 400
gtgcccttct gcagcttcat tgattttggt tatcttcact attaattgta 450
acgattaaaa aagaataaga gcacgcagac ctctaggaga atattttatc 500
cctgggtgcc cctgacacat ttatgtagtg atcccacaaa tgtgattgtt 550
aatttaaatg ttatttotaat attagtagat tcagttgtga tgtaatatga 600
ataaccagaa tctattttctt aaaagttttg agtatatttt tcaactagat 650
atttgtatag aaagactgaa tagtgatg 678

<210> 203
<211> 52
<212> PRT
<213> Homo sapiens

<400> 203
Met Gly Val Glu Ile Ala Phe Ala Ser Val Ile Leu Thr Cys Leu
1 5 10 15
Ser Leu Leu Ala Ala Gly Val Ser Gln Val Val Leu Leu Gln Pro
20 25 30
Val Pro Thr Gln Glu Thr Gly Pro Lys Ala Met Gly Asp Leu Ser
35 40 45
Cys Gly Phe Ala Gly His Ser
50

<210> 204
<211> 1917
<212> DNA
<213> Homo sapiens

<400> 204
ggggaatctg cagtaggtct gccggcgatg gagtgggagg ctagctcgcc 50
gcttcggctc tggctgctgt tgttcctcct gccctcagcg cagggcccgcc 100
agaaggagtc aggttcaaaa tggaaagtat ttattgacca aattaacagg 150
tctttggaga attacgaacc atgttcaagt caaaactgca gctgctacca 200
tgggtgtcata gaagaggatc taactccttt ccgaggaggc atctccagga 250
agatgatggc agaggtagtc agacggaagc tagggaccca ctatcagatc 300
actaagaaca gactgtaccg ggaaaatgac tgcattgttc cctcaagggtg 350
tagtgggtgt gagcacttta ttttgggaagt gatcgggcgt ctccctgaca 400
tggagatggg gatcaatgta cgagattatc ctccaggttc taaatggatg 450
gagcctgcca tcccagtctt ctccctcagt aagacatcag agtaccatga 500
tatcatgtat cctgcttgga cattttggga agggggacct gctgtttggc 550
caatttatcc tacaggtctt ggacgggtggg acctcttcag agaagatctg 600
gtaaggtcag cagcacagtg gccatggaaa aagaaaaact ctacagcata 650
tttccgagga tcaaggacaa gtccagaacg agatcctctc attcttctgt 700
ctcggaaaaa cccaaaactt gttgatgcag aatacaccaa aaaccaggcc 750
tggaaatcta tgaaagatac cttaggaaag ccagctgcta aggatgtcca 800
tcttgtggat cactgcaa atcaagtatct gtttaatttt cgaggcgtag 850
ctgcaagttt ccggtttaaa cacctcttcc tgtgtggctc acttgttttc 900
catgttggtg atgagtggct agaattcttc tatccacagc tgaagccatg 950
ggttcactat atccagtc aaacagatct ctccaatgtc caagagctgt 1000

tacaatttgt aaaagcaaat gatgatgtag ctcaagagat tgctgaaagg 1050
 ggaagccagt ttattaggaa ccatttgcag atggatgaca tcacctgtta 1100
 ctggggagaac ctcttgagtg aatactctaa attcctgtct tataatgtaa 1150
 cgagaaggaa aggttatgat caaattattc ccaaaatggt gaaaactgaa 1200
 ctatagtagt catcatagga ccatagtctt ctttgtggca acagatctca 1250
 gatatcctac ggtgagaagc ttaccataag cttggctcct ataccttgaa 1300
 tatctgctat caagccaaat acctggtttt ctttatcatg ctgcaccag 1350
 agcaactctt gagaaagatt taaaatgtgt ctaatacact gatatgaagc 1400
 agttcaactt ttgggatgaa taaggaccag aaatcgtgag atgtggattt 1450
 tgaacccaac tctaccttct attttcttaa gaccaatcac agcttgtgcc 1500
 tcagatcatc cacctgtgtg agtccatcac tgtgaaattg actgtgtcca 1550
 tgtgatgatg ccttttgtcc cattatttgg agcagaaaat tcgtcatttg 1600
 gaagtagtac aactcattgc tggaattgtg aaattattca aggcgtgatc 1650
 tctgtcactt tattttaatg taggaaacc tatgggggtt atgaaaaata 1700
 cttggggatc attctctgaa tgggtctaagg aagcggtagc catgccatgc 1750
 aatgatgtag gagttctctt ttgtaaaacc ataaactctg ttactcagga 1800
 ggtttctata atgccacata gaaagaggcc aattgcatga gtaattattg 1850
 caattggatt tcagggtccc ttttgtgcc ttcatgccct acttcttaat 1900
 gcctctctaa agccaaa 1917

<210> 205
 <211> 392
 <212> PRT
 <213> Homo sapiens

<400> 205
 Met Glu Trp Trp Ala Ser Ser Pro Leu Arg Leu Trp Leu Leu Leu
 1 5 10 15
 Phe Leu Leu Pro Ser Ala Gln Gly Arg Gln Lys Glu Ser Gly Ser
 20 25 30
 Lys Trp Lys Val Phe Ile Asp Gln Ile Asn Arg Ser Leu Glu Asn
 35 40 45
 Tyr Glu Pro Cys Ser Ser Gln Asn Cys Ser Cys Tyr His Gly Val
 50 55 60
 Ile Glu Glu Asp Leu Thr Pro Phe Arg Gly Gly Ile Ser Arg Lys
 65 70 75
 Met Met Ala Glu Val Val Arg Arg Lys Leu Gly Thr His Tyr Gln
 80 85 90
 Ile Thr Lys Asn Arg Leu Tyr Arg Glu Asn Asp Cys Met Phe Pro

	95	100	105
Ser Arg Cys Ser	Gly Val Glu His Phe	Ile Leu Glu Val Ile	Gly
	110	115	120
Arg Leu Pro Asp	Met Glu Met Val Ile	Asn Val Arg Asp Tyr	Pro
	125	130	135
Gln Val Pro Lys	Trp Met Glu Pro Ala	Ile Pro Val Phe Ser	Phe
	140	145	150
Ser Lys Thr Ser	Glu Tyr His Asp Ile	Met Tyr Pro Ala Trp	Thr
	155	160	165
Phe Trp Glu Gly	Gly Pro Ala Val Trp	Pro Ile Tyr Pro Thr	Gly
	170	175	180
Leu Gly Arg Trp	Asp Leu Phe Arg Glu	Asp Leu Val Arg Ser	Ala
	185	190	195
Ala Gln Trp Pro	Trp Lys Lys Lys Asn	Ser Thr Ala Tyr Phe	Arg
	200	205	210
Gly Ser Arg Thr	Ser Pro Glu Arg Asp	Pro Leu Ile Leu Leu	Ser
	215	220	225
Arg Lys Asn Pro	Lys Leu Val Asp Ala	Glu Tyr Thr Lys Asn	Gln
	230	235	240
Ala Trp Lys Ser	Met Lys Asp Thr Leu	Gly Lys Pro Ala Ala	Lys
	245	250	255
Asp Val His Leu	Val Asp His Cys Lys	Tyr Lys Tyr Leu Phe	Asn
	260	265	270
Phe Arg Gly Val	Ala Ala Ser Phe Arg	Phe Lys His Leu Phe	Leu
	275	280	285
Cys Gly Ser Leu	Val Phe His Val Gly	Asp Glu Trp Leu Glu	Phe
	290	295	300
Phe Tyr Pro Gln	Leu Lys Pro Trp Val	His Tyr Ile Pro Val	Lys
	305	310	315
Thr Asp Leu Ser	Asn Val Gln Glu Leu	Leu Gln Phe Val Lys	Ala
	320	325	330
Asn Asp Asp Val	Ala Gln Glu Ile Ala	Glu Arg Gly Ser Gln	Phe
	335	340	345
Ile Arg Asn His	Leu Gln Met Asp Asp	Ile Thr Cys Tyr Trp	Glu
	350	355	360
Asn Leu Leu Ser	Glu Tyr Ser Lys Phe	Leu Ser Tyr Asn Val	Thr
	365	370	375
Arg Arg Lys Gly	Tyr Asp Gln Ile Ile	Pro Lys Met Leu Lys	Thr
	380	385	390
Glu Leu			

<210> 206

<211> 1425
<212> DNA
<213> Homo sapiens

<400> 206
caccctcca ttctogcca tggccctgc actgctcctg atccctgctg 50
ccctgcctc ttctatcctg gcctttggca ccggagtgga gttcgtgcgc 100
tttacctcc ttcgccact tcttgaggg atcccgagt ctggtggtcc 150
ggatgccgc cagggatggc tggctgccct gcaggaccgc agcatccttg 200
ccccctggc atgggatctg gggctcctgc ttctatttgt tgggcagcac 250
agcctcatgg cagctgaaag agtgaaggca tggacatccc ggtacttttg 300
ggtccttcag aggtcactgt atgtggcctg cactgccctg gccttgacgc 350
tggtgatgcg gtactgggag ccataccca aaggccctgt gttgtgggag 400
gctcgggctg agccatgggc cactgggtg ccgctcctct gctttgtgct 450
ccatgtcatc tcctggctcc tcacttttag catccttctc gtctttgact 500
atgctgagct catgggcctc aaacaggtat actaccatgt gctggggctg 550
ggcgagcctc tggccctgaa gtctccccgg gctctcagac tcttctcca 600
cctgcgccac ccagtgtgtg tggagctgct gacagtgcctg tgggtggtgc 650
ctaccctggg cagggacctg ctctccttg ctttctcct taccctctac 700
ctgggcctgg ctacgggct tgatcagcaa gaactccgct acctccgggc 750
ccagctacaa agaaaactcc acctgctctc tggccccag gatggggagg 800
cagagtgagg agctcactct ggttacaagc cctgttcttc ctctccact 850
gaattctaaa tccttaacat ccaggccctg gctgcttcat gccagaggcc 900
caaatccatg gactgaagga gatgcccctt ctactacttg agactttatt 950
ctctgggtcc agctccatac cctaaattct gagtttcagc cactgaactc 1000
caagggtccac ttctcaccag caaggaagag tggggtatgg aagtcactctg 1050
tcccttact gtttagagca tgacactctc cccctcaaca gcctcctgag 1100
aaggaaagga tctgcctga ccactcccct ggcactgtta cttgcctctg 1150
cgctcaggg gtcccttct gcacogctgg cttccactcc aagaagggtg 1200
accagggtct gcaagttcaa cggcatagc tgtccctcca ggccccaacc 1250
ttgcctcacc actccggcc ctagtctctg cacctcctta ggccctgcct 1300
ctgggctcag accccaacct agtcaagggg attctcctgc tottaactcg 1350
atgacttggg gctccctgct ctcccgagga agatgctctg caggaaaata 1400
aaagtcagcc tttttctaaa aaaaa 1425

<210> 207
 <211> 262
 <212> PRT
 <213> Homo sapiens

<400> 207

Met	Ala	Pro	Ala	Leu	Leu	Leu	Ile	Pro	Ala	Ala	Leu	Ala	Ser	Phe
1				5					10					15
Ile	Leu	Ala	Phe	Gly	Thr	Gly	Val	Glu	Phe	Val	Arg	Phe	Thr	Ser
				20					25					30
Leu	Arg	Pro	Leu	Leu	Gly	Gly	Ile	Pro	Glu	Ser	Gly	Gly	Pro	Asp
				35					40					45
Ala	Arg	Gln	Gly	Trp	Leu	Ala	Ala	Leu	Gln	Asp	Arg	Ser	Ile	Leu
				50					55					60
Ala	Pro	Leu	Ala	Trp	Asp	Leu	Gly	Leu	Leu	Leu	Phe	Val	Gly	
				65					70					75
Gln	His	Ser	Leu	Met	Ala	Ala	Glu	Arg	Val	Lys	Ala	Trp	Thr	Ser
				80					85					90
Arg	Tyr	Phe	Gly	Val	Leu	Gln	Arg	Ser	Leu	Tyr	Val	Ala	Cys	Thr
				95					100					105
Ala	Leu	Ala	Leu	Gln	Leu	Val	Met	Arg	Tyr	Trp	Glu	Pro	Ile	Pro
				110					115					120
Lys	Gly	Pro	Val	Leu	Trp	Glu	Ala	Arg	Ala	Glu	Pro	Trp	Ala	Thr
				125					130					135
Trp	Val	Pro	Leu	Leu	Cys	Phe	Val	Leu	His	Val	Ile	Ser	Trp	Leu
				140					145					150
Leu	Ile	Phe	Ser	Ile	Leu	Leu	Val	Phe	Asp	Tyr	Ala	Glu	Leu	Met
				155					160					165
Gly	Leu	Lys	Gln	Val	Tyr	Tyr	His	Val	Leu	Gly	Leu	Gly	Glu	Pro
				170					175					180
Leu	Ala	Leu	Lys	Ser	Pro	Arg	Ala	Leu	Arg	Leu	Phe	Ser	His	Leu
				185					190					195
Arg	His	Pro	Val	Cys	Val	Glu	Leu	Leu	Thr	Val	Leu	Trp	Val	Val
				200					205					210
Pro	Thr	Leu	Gly	Thr	Asp	Arg	Leu	Leu	Leu	Ala	Phe	Leu	Leu	Thr
				215					220					225
Leu	Tyr	Leu	Gly	Leu	Ala	His	Gly	Leu	Asp	Gln	Gln	Asp	Leu	Arg
				230					235					240
Tyr	Leu	Arg	Ala	Gln	Leu	Gln	Arg	Lys	Leu	His	Leu	Leu	Ser	Arg
				245					250					255
Pro	Gln	Asp	Gly	Glu	Ala	Glu								
				260										

<210> 208
 <211> 2095
 <212> DNA

<213> Homo sapiens

<400> 208

ccgagcacag gagattgcct gcgttttagga ggtggctgcg ttgtgggaaa 50
agctatcaag gaagaaattg ccaaaccatg tctttttttc tgttttcaga 100
gtagttcaca acagatctga gtgttttaat taagcatgga atacagaaaa 150
caacaaaaaa cttaagcttt aatttcatct ggaattccac agttttctta 200
gtcccttggg cccggttgac ctgttggctc ttcccgtgg ctgctctatc 250
acgtggtgct ctccgactac tcaccccgag tgtaaagaac cttcggctcg 300
cgtgcttctg agctgctgtg gatggcctcg gctctctgga ctgtccttcc 350
gagtaggatg tcactgagat cctcaaatg gagcctcctg ctgctgtcac 400
tcctgagttt ctttgtgatg tggtaacctca gccttcccca ctacaatgtg 450
atagaacgcg tgaactggat gtacttctat gagtatgagc cgatttacag 500
acaagacttt cacttcacac ttcgagagca ttcaaactgc tctcatcaaa 550
atccatttct ggtcatttctg gtgacctccc acccttcaga tgtgaaagcc 600
aggcaggcca ttagagttac ttgggggtgaa aaaaagtctt ggtggggata 650
tgaggttctt acatttttct tattaggcca agaggctgaa aaggaagaca 700
aaatgttggc attgtcctta gaggatgaac accttcttta tggtgacata 750
atccgacaag attttttaga cacatataat aacctgacct tgaaaacccat 800
tatggcattc aggtgggtaa ctgagttttg cccaatgcc aagtacgtaa 850
tgaagacaga cactgatgtt ttcatcaata ctggcaattt agtgaagtat 900
cttttaaacc taaaccactc agagaagttt ttcacagggt atcctctaata 950
tgataattat tcctatagag gattttacca aaaaacccat atttcttacc 1000
aggagtatcc tttcaagggt ttccctccat actgcagtgg gttgggttat 1050
ataatgtcca gagatttggg gccaaaggatc tatgaaatga tgggtcacgt 1100
aaaacccatc aagtttgaag atgtttatgt cgggatctgt ttgaatttat 1150
taaaagtga cttcatatt ccagaagaca caaatctttt ctttctatat 1200
agaatccatt tggatgtctg tcaactgaga cgtgtgattg cagcccatgg 1250
cttttcttcc aaggagatca tcactttttg gcaggatcatg ctaaggaaca 1300
ccacatgcca ttattaactt cacattctac aaaaagccta gaaggacagg 1350
ataccttgtg gaaagtgtta aataaagtag gtactgtgga aaattcatgg 1400
ggaggtcagt gtgctggctt aactgaact gaaactcatg aaaaaccag 1450
actggagact ggagggttac acttgtgatt tattagtcag gcccttcaaa 1500

gatgatatgt ggaggaatta aatataaagg aattggaggt ttttgctaaa 1550
 gaaattaata ggaccaaaca atttggacat gtcattctgt agactagaat 1600
 ttcttaaaaag ggtgttactg agttataagc tcactaggct gtaaaaacaa 1650
 aacaatgtag agttttatatt attgaacaat gtagtcactt gaaggttttg 1700
 tgtatatctt atgtggatta ccaatttaaa aatatatgta gttctgtgtc 1750
 aaaaaacttc ttactgaag ttatactgaa caaaatttta cctgtttttg 1800
 gtcatttata aagtacttca agatgttgca gtatttcaca gttattatta 1850
 tttaaaatta cttcaacttt gtgttttttaa atgttttgac gatttcaata 1900
 caagataaaa aggatagtga atcattcttt acatgcaaac attttccagt 1950
 tacttaactg atcagtttat tattgatata tcactccatt aatgtaaagt 2000
 cataggtcat tattgcatat cagtaatctc ttggactttg ttaaataattt 2050
 tactgtggta atatagagaa gaattaaagc aagaaaatct gaaaa 2095

<210> 209

<211> 331

<212> PRT

<213> Homo sapiens

<400> 209

Met	Ala	Ser	Ala	Leu	Trp	Thr	Val	Leu	Pro	Ser	Arg	Met	Ser	Leu
1				5					10					15
Arg	Ser	Leu	Lys	Trp	Ser	Leu	Leu	Leu	Leu	Ser	Leu	Leu	Ser	Phe
			20						25					30
Phe	Val	Met	Trp	Tyr	Leu	Ser	Leu	Pro	His	Tyr	Asn	Val	Ile	Glu
			35						40					45
Arg	Val	Asn	Trp	Met	Tyr	Phe	Tyr	Glu	Tyr	Glu	Pro	Ile	Tyr	Arg
			50						55					60
Gln	Asp	Phe	His	Phe	Thr	Leu	Arg	Glu	His	Ser	Asn	Cys	Ser	His
			65						70					75
Gln	Asn	Pro	Phe	Leu	Val	Ile	Leu	Val	Thr	Ser	His	Pro	Ser	Asp
			80						85					90
Val	Lys	Ala	Arg	Gln	Ala	Ile	Arg	Val	Thr	Trp	Gly	Glu	Lys	Lys
			95						100					105
Ser	Trp	Trp	Gly	Tyr	Glu	Val	Leu	Thr	Phe	Phe	Leu	Leu	Gly	Gln
			110						115					120
Glu	Ala	Glu	Lys	Glu	Asp	Lys	Met	Leu	Ala	Leu	Ser	Leu	Glu	Asp
			125						130					135
Glu	His	Leu	Leu	Tyr	Gly	Asp	Ile	Ile	Arg	Gln	Asp	Phe	Leu	Asp
			140						145					150
Thr	Tyr	Asn	Asn	Leu	Thr	Leu	Lys	Thr	Ile	Met	Ala	Phe	Arg	Trp
			155						160					165

Val	Thr	Glu	Phe	Cys	Pro	Asn	Ala	Lys	Tyr	Val	Met	Lys	Thr	Asp	
				170					175					180	
Thr	Asp	Val	Phe	Ile	Asn	Thr	Gly	Asn	Leu	Val	Lys	Tyr	Leu	Leu	
				185					190					195	
Asn	Leu	Asn	His	Ser	Glu	Lys	Phe	Phe	Thr	Gly	Tyr	Pro	Leu	Ile	
				200					205					210	
Asp	Asn	Tyr	Ser	Tyr	Arg	Gly	Phe	Tyr	Gln	Lys	Thr	His	Ile	Ser	
				215					220					225	
Tyr	Gln	Glu	Tyr	Pro	Phe	Lys	Val	Phe	Pro	Pro	Tyr	Cys	Ser	Gly	
				230					235					240	
Leu	Gly	Tyr	Ile	Met	Ser	Arg	Asp	Leu	Val	Pro	Arg	Ile	Tyr	Glu	
				245					250					255	
Met	Met	Gly	His	Val	Lys	Pro	Ile	Lys	Phe	Glu	Asp	Val	Tyr	Val	
				260					265					270	
Gly	Ile	Cys	Leu	Asn	Leu	Leu	Lys	Val	Asn	Ile	His	Ile	Pro	Glu	
				275					280					285	
Asp	Thr	Asn	Leu	Phe	Phe	Leu	Tyr	Arg	Ile	His	Leu	Asp	Val	Cys	
				290					295					300	
Gln	Leu	Arg	Arg	Val	Ile	Ala	Ala	His	Gly	Phe	Ser	Ser	Lys	Glu	
				305					310					315	
Ile	Ile	Thr	Phe	Trp	Gln	Val	Met	Leu	Arg	Asn	Thr	Thr	Cys	His	
				320					325					330	

Tyr

<210> 210
 <211> 745
 <212> DNA
 <213> Homo sapiens

<400> 210
 cctctgtcca ctgctttcgt gaagacaaga tgaagttcac aattgtcttt 50
 gctggacttc ttggagtctt tctagctcct gccctagcta actataatat 100
 caacgtcaat gatgacaaca acaatgctgg aagtgggcag cagtcagtga 150
 gtgtcaacaa tgaacacaat gtggccaatg ttgacaataa caacggatgg 200
 gactcctgga attccatctg ggattatgga aatggctttg ctgcaaccag 250
 actctttcaa aagaagacat gcattgtgca caaatgaac aaggaagtca 300
 tgccctccat tcaatccctt gatgcactgg tcaaggaaaa gaagcttcag 350
 ggtaagggac caggaggacc acctcccaag ggctgatgt actcagtcaa 400
 cccaaacaaa gtcgatgacc tgagcaagtt cggaaaaaac attgcaaaca 450
 tgtgtcgtgg gattccaaca tacatggctg aggagatgca agaggcaagc 500
 ctgttttttt actcaggaac gtgctacacg accagtgtac tatggattgt 550

ggacatttcc ttctgtggag acacggtgga gaactaaaca attttttaaa 600
gccactatgg atttagtcat ctgaatatgc tgtgcagaaa aaatatgggc 650
tccagtgggtt tttaccatgt cattctgaaa tttttctcta ctagttatgt 700
ttgatttctt taagtttcaa taaaatcatt tagcattgaa aaaaa 745

<210> 211
<211> 185
<212> PRT
<213> Homo sapiens

<400> 211
Met Lys Phe Thr Ile Val Phe Ala Gly Leu Leu Gly Val Phe Leu
1 5 10 15
Ala Pro Ala Leu Ala Asn Tyr Asn Ile Asn Val Asn Asp Asp Asn
20 25 30
Asn Asn Ala Gly Ser Gly Gln Gln Ser Val Ser Val Asn Asn Glu
35 40 45
His Asn Val Ala Asn Val Asp Asn Asn Asn Gly Trp Asp Ser Trp
50 55 60
Asn Ser Ile Trp Asp Tyr Gly Asn Gly Phe Ala Ala Thr Arg Leu
65 70 75
Phe Gln Lys Lys Thr Cys Ile Val His Lys Met Asn Lys Glu Val
80 85 90
Met Pro Ser Ile Gln Ser Leu Asp Ala Leu Val Lys Glu Lys Lys
95 100 105
Leu Gln Gly Lys Gly Pro Gly Gly Pro Pro Pro Lys Gly Leu Met
110 115 120
Tyr Ser Val Asn Pro Asn Lys Val Asp Asp Leu Ser Lys Phe Gly
125 130 135
Lys Asn Ile Ala Asn Met Cys Arg Gly Ile Pro Thr Tyr Met Ala
140 145 150
Glu Glu Met Gln Glu Ala Ser Leu Phe Phe Tyr Ser Gly Thr Cys
155 160 165
Tyr Thr Thr Ser Val Leu Trp Ile Val Asp Ile Ser Phe Cys Gly
170 175 180
Asp Thr Val Glu Asn
185

<210> 212
<211> 1706
<212> DNA
<213> Homo sapiens

<400> 212
catttctgaa actaatcgtg tcagaattga ctttgaaaag cattgctttt 50
tacagaagta tattaacttt ttaggagtaa tttctagttt ggattgtaat 100

atgaaataat ttaaaagggc ttcgctcata tataggaaaa tcgcatatgg 150
 tcctagtatt aaattccttat tgcttactga tttttttgag ttaagagttg 200
 ttatatgcta gaatatgagg atgtgaatat aaataagaga agaaaaaaga 250
 ataaagtaga ttgagtctcc aattttatgt aagcttcaga agaactgggt 300
 tgtttacatg caagcttata gttgaaatat ttttcaggaa ttacatgaat 350
 gacagtcttc gaaccaatgt gtttgttcga tttcaaccag agactatagc 400
 atgtgcttgc atctaccttg cagctagagc acttcagatt ccgttgccaa 450
 ctcgccccca ttggtttctt ctttttggtg ctacagaaga ggaaatccag 500
 gaaatctgca tagaaacact taggctttat accagaaaaa agccaaacta 550
 tgaattactg gaaaaagaag tagaaaaaag aaaagtagcc ttacaagaag 600
 ccaaattaaa agcaaaggga ttgaatccgg atggaactcc agccctttca 650
 accctgggtg gattttctcc agcctccaag ccatcatcac caagagaagt 700
 aaaagctgaa gagaaatcac caatctccat taatgtgaag acagtcaaaa 750
 aagaacctga ggatagacaa caggcttcca aaagccctta caatggtgta 800
 agaaaagaca gcaagagaag tagaaatagc agaagtgcaa gtcgatcgag 850
 gtcaagaaca cgatcacgtt ctagatcaca tactccaaga agacactata 900
 ataataggcg gagtcgatct ggaacataca gctcgagatc aagaagcagg 950
 tcccgcagtc acagtgaag ccctcgaaga catcataatc atggttctcc 1000
 tcaccttaag gccaaagcata ccagagatga tttaaaaagt tcaaacagac 1050
 atggtcataa aaggaaaaaa tctcgttctc gatctcagag caagtctcgg 1100
 gatcactcag atgcagccaa gaaacacagg catgaaaggg gacatcatag 1150
 ggacaggcgt gaacgatctc gtccttttga gaggtcccat aaaagcaagc 1200
 accatggtgg cagtcgctca ggacatggca ggcacaggcg ctgactttct 1250
 cttcctttga gcctgcatca gttcttggtt ttgcctatct acagtgtgat 1300
 gtatggactc aatcaaaaaac attaaacgca aactgattag gatttgattt 1350
 cttgaaaccc tctaggtctc tagaactg aggcagttt cttttgaaaa 1400
 gaactatggt aatttttttg cacattaaaa tgccttagca gtatctaatt 1450
 aaaaaccatg gtcaggttca attgtacttt attatagttg tgtattgttt 1500
 attgctataa gaactggagc gtgaattctg taaaaatgta tcttattttt 1550
 atacagataa aattgcagac actgttctat ttaagtgggt atttgtttaa 1600
 atgatgggtga atactttctt aacactgggt tgtctgcatg tgtaaagatt 1650
 tttacaagga aataaaatac aaatcttggt ttttctaaaa aaaaaaaaaa 1700

aaaagt 1706

<210> 213

<211> 299

<212> PRT

<213> Homo sapiens

<400> 213

Met	Asn	Asp	Ser	Leu	Arg	Thr	Asn	Val	Phe	Val	Arg	Phe	Gln	Pro	
1				5					10					15	
Glu	Thr	Ile	Ala	Cys	Ala	Cys	Ile	Tyr	Leu	Ala	Ala	Arg	Ala	Leu	
				20					25					30	
Gln	Ile	Pro	Leu	Pro	Thr	Arg	Pro	His	Trp	Phe	Leu	Leu	Phe	Gly	
				35					40					45	
Thr	Thr	Glu	Glu	Glu	Ile	Gln	Glu	Ile	Cys	Ile	Glu	Thr	Leu	Arg	
				50					55					60	
Leu	Tyr	Thr	Arg	Lys	Lys	Pro	Asn	Tyr	Glu	Leu	Leu	Glu	Lys	Glu	
				65					70					75	
Val	Glu	Lys	Arg	Lys	Val	Ala	Leu	Gln	Glu	Ala	Lys	Leu	Lys	Ala	
				80					85					90	
Lys	Gly	Leu	Asn	Pro	Asp	Gly	Thr	Pro	Ala	Leu	Ser	Thr	Leu	Gly	
				95					100					105	
Gly	Phe	Ser	Pro	Ala	Ser	Lys	Pro	Ser	Ser	Pro	Arg	Glu	Val	Lys	
				110					115					120	
Ala	Glu	Glu	Lys	Ser	Pro	Ile	Ser	Ile	Asn	Val	Lys	Thr	Val	Lys	
				125					130					135	
Lys	Glu	Pro	Glu	Asp	Arg	Gln	Gln	Ala	Ser	Lys	Ser	Pro	Tyr	Asn	
				140					145					150	
Gly	Val	Arg	Lys	Asp	Ser	Lys	Arg	Ser	Arg	Asn	Ser	Arg	Ser	Ala	
				155					160					165	
Ser	Arg	Ser	Arg	Ser	Arg	Thr	Arg	Ser	Arg	Ser	Arg	Ser	His	Thr	
				170					175					180	
Pro	Arg	Arg	His	Tyr	Asn	Asn	Arg	Arg	Ser	Arg	Ser	Gly	Thr	Tyr	
				185					190					195	
Ser	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	His	Ser	Glu	Ser	Pro	
				200					205					210	
Arg	Arg	His	His	Asn	His	Gly	Ser	Pro	His	Leu	Lys	Ala	Lys	His	
				215					220					225	
Thr	Arg	Asp	Asp	Leu	Lys	Ser	Ser	Asn	Arg	His	Gly	His	Lys	Arg	
				230					235					240	
Lys	Lys	Ser	Arg	Ser	Arg	Ser	Gln	Ser	Lys	Ser	Arg	Asp	His	Ser	
				245					250					255	
Asp	Ala	Ala	Lys	Lys	His	Arg	His	Glu	Arg	Gly	His	His	Arg	Asp	
				260					265					270	
Arg	Arg	Glu	Arg	Ser	Arg	Ser	Phe	Glu	Arg	Ser	His	Lys	Ser	Lys	

His His Gly Gly Ser Arg Ser Gly His Gly Arg His Arg Arg
290 295

<210> 214

<211> 730

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 72-73, 85, 91, 127, 226, 268, 454, 484, 513, 566, 663

<223> unknown base

<400> 214

tggggataaaa ggaaaaaatgg tcaggtatta atggcttaaa gattattgga 50
agggggtttat ctttttttga anntattcgg gtcanaattg nctttgaaaa 100
gcattgcttt ttacagaaat atattancctt tttagagtaa tttctagttt 150
ggattgtaat atgaaattat ttaaaagggc ttcgctcata tataggaaaa 200
tcgcatatgg toctagtatt aaattnttat tgcttactga tttttttgag 250
ttaagagttg ttatatgnta gaatatgagg atgtgaatat aaataagaga 300
agaaaaaaga ataaagtaga ttgagtctcc aattttatgt aagcttcaga 350
agaactgggtt tgtttacatg caagcttata gttgaaatat ttttcaggaa 400
ttacatgaat gacagtcttc gaaccaatgt gtttgttcga tttcaaccag 450
agantatagc atgtgcttgc atctaccttg cagntagagc acttcagatt 500
ccgttgccaa ctngtcccca ttgggtttctt ctttttggtg ctacagaaga 550
ggaaatccag gaaatntgca tagaaacact taggctttat accagaaaaa 600
agccaaacta tgaattactg gaaaaagaag tagaaaaaag aaaagtagcc 650
ttacaagaag ccnaattaaa agcaaaggga ttgaatccgg atggaactcc 700
agccctttca accctgggtg gattttctcc 730

<210> 215

<211> 1807

<212> DNA

<213> Homo sapiens

<400> 215

ggcacgaggc ctctgtgcaa gcttggcacg aggggtgcacc gcgttctcgc 50
acgcgtcatg gcggtcctcg gactacagct ggtggtgacc ctgctcactg 100
ccaccctcat gcacaggctg gcgccacact gctccttcgc gcgctggctg 150
ctctgtaacg gcagtttgtt ccgatacaag caccctctg agaggagct 200
tcgggccctg gcggggaagc cgaggcccag aggcaggaaa gagcgggtggg 250
ccaatggcct tagtgaggag aagccactgt ctgtgccccg agatgccccg 300

ttccagctgg agacctgccc cctcaagacc gtggatgccc tggctcctgcg 350
 cttcttcctg gagtaccagt ggtttgtgga ctttgctgtg tactcgggcg 400
 gcgtgtacct cttcacagag gcctactact acatgctggg accagccaag 450
 gagactaaca ttgctgtggt ctgggtgcctg ctcacggtga ctttctccat 500
 caagatgttc ctgacagtga cacggctgta cttcagcgcc gagggagggg 550
 gtgagcgctc tgtctgcctc acctttgcct tctcttcct gctgctggcc 600
 atgctggtgc aagtgggtgc ggaggagacc ctcgagctgg gcctggagcc 650
 tggctcggcc agcatgaccc agaacttaga gccacttctg aagaagcagg 700
 gctgggactg ggcgcttcct gtggccaagc tggctatccg cgtgggactg 750
 gcagtgggtg gctctgtgct ggggtgccttc ctcaccttcc caggcctgcg 800
 gctggcccag acccaccggg acgcactgac catgtcggag gacagacca 850
 tgctgcagtt cctcctgcac accagcttcc tgtctccct gttcatcctg 900
 tggctctgga caaagcccat tgcacgggac ttcctgcacc agccgccgtt 950
 tggggagacg cgtttctccc tgcctgcga ttctgccttc gactctgggc 1000
 gcctctgggt gctggtggtg ctgtgcctgc tgcggctggc ggtgaccg 1050
 cccacctgc aggcctacct gtgcctggcc aaggccggg tggagcagct 1100
 gcgaaggag gctggccgca tcgaagcccg tgaaatccag cagagggtgg 1150
 tccgagtcta ctgctatgtg accgtggtga gcttgagta cctgacgccg 1200
 ctcatcctca cctcaactg cacacttctg ctaagacgc tgggaggcta 1250
 ttcctggggc ctggggccag ctctctact atccccgac ccatcctcag 1300
 ccagcgtgc ccccatcggc tctggggagg acgaagtcca gcagactgca 1350
 gcgcggattg ccggggccct ggggtggcctg cttactcccc tcttctccg 1400
 tggcgtcctg gcctacctca tctggtggac ggctgcctgc cagctgctcg 1450
 ccagcctttt cggcctctac ttccaccagc acttggcagg ctctagctg 1500
 cctgcagacc ctctggggc cctgaggtct gttcctgggg cagcgggaca 1550
 ctagcctgcc cctctgttt gcgccccgt gtcccagct gcaagggtgg 1600
 gccggactcc ccggcgttcc cttcaccaca gtgcctgacc cgcggcccc 1650
 cttggacgcc gagtttctgc ctcagaaactg tctctcctgg gccagcagc 1700
 atgagggtcc cgaggccatt gtctccgaag cgtatgtgcc aggtttgagt 1750
 ggcgagggtg atgctggtg ctcttctgaa caaataaagg agcatgccga 1800
 tttttaa 1807

<210> 216

<211> 479
 <212> PRT
 <213> Homo sapiens

<400> 216

Met	Ala	Val	Leu	Gly	Val	Gln	Leu	Val	Val	Thr	Leu	Leu	Thr	Ala	1	5	10	15
Thr	Leu	Met	His	Arg	Leu	Ala	Pro	His	Cys	Ser	Phe	Ala	Arg	Trp	20	25	30	
Leu	Leu	Cys	Asn	Gly	Ser	Leu	Phe	Arg	Tyr	Lys	His	Pro	Ser	Glu	35	40	45	
Glu	Glu	Leu	Arg	Ala	Leu	Ala	Gly	Lys	Pro	Arg	Pro	Arg	Gly	Arg	50	55	60	
Lys	Glu	Arg	Trp	Ala	Asn	Gly	Leu	Ser	Glu	Glu	Lys	Pro	Leu	Ser	65	70	75	
Val	Pro	Arg	Asp	Ala	Pro	Phe	Gln	Leu	Glu	Thr	Cys	Pro	Leu	Thr	80	85	90	
Thr	Val	Asp	Ala	Leu	Val	Leu	Arg	Phe	Phe	Leu	Glu	Tyr	Gln	Trp	95	100	105	
Phe	Val	Asp	Phe	Ala	Val	Tyr	Ser	Gly	Gly	Val	Tyr	Leu	Phe	Thr	110	115	120	
Glu	Ala	Tyr	Tyr	Tyr	Met	Leu	Gly	Pro	Ala	Lys	Glu	Thr	Asn	Ile	125	130	135	
Ala	Val	Phe	Trp	Cys	Leu	Leu	Thr	Val	Thr	Phe	Ser	Ile	Lys	Met	140	145	150	
Phe	Leu	Thr	Val	Thr	Arg	Leu	Tyr	Phe	Ser	Ala	Glu	Glu	Gly	Gly	155	160	165	
Glu	Arg	Ser	Val	Cys	Leu	Thr	Phe	Ala	Phe	Leu	Phe	Leu	Leu	Leu	170	175	180	
Ala	Met	Leu	Val	Gln	Val	Val	Arg	Glu	Glu	Thr	Leu	Glu	Leu	Gly	185	190	195	
Leu	Glu	Pro	Gly	Leu	Ala	Ser	Met	Thr	Gln	Asn	Leu	Glu	Pro	Leu	200	205	210	
Leu	Lys	Lys	Gln	Gly	Trp	Asp	Trp	Ala	Leu	Pro	Val	Ala	Lys	Leu	215	220	225	
Ala	Ile	Arg	Val	Gly	Leu	Ala	Val	Val	Gly	Ser	Val	Leu	Gly	Ala	230	235	240	
Phe	Leu	Thr	Phe	Pro	Gly	Leu	Arg	Leu	Ala	Gln	Thr	His	Arg	Asp	245	250	255	
Ala	Leu	Thr	Met	Ser	Glu	Asp	Arg	Pro	Met	Leu	Gln	Phe	Leu	Leu	260	265	270	
His	Thr	Ser	Phe	Leu	Ser	Pro	Leu	Phe	Ile	Leu	Trp	Leu	Trp	Thr	275	280	285	
Lys	Pro	Ile	Ala	Arg	Asp	Phe	Leu	His	Gln	Pro	Pro	Phe	Gly	Glu				

290	295	300
Thr Arg Phe Ser Leu Leu Ser Asp Ser	Ala Phe Asp Ser Gly Arg	
305	310	315
Leu Trp Leu Leu Val Val Leu Cys Leu	Leu Arg Leu Ala Val Thr	
320	325	330
Arg Pro His Leu Gln Ala Tyr Leu Cys	Leu Ala Lys Ala Arg Val	
335	340	345
Glu Gln Leu Arg Arg Glu Ala Gly Arg	Ile Glu Ala Arg Glu Ile	
350	355	360
Gln Gln Arg Val Val Arg Val Tyr Cys	Tyr Val Thr Val Val Ser	
365	370	375
Leu Gln Tyr Leu Thr Pro Leu Ile Leu	Thr Leu Asn Cys Thr Leu	
380	385	390
Leu Leu Lys Thr Leu Gly Gly Tyr Ser	Trp Gly Leu Gly Pro Ala	
395	400	405
Pro Leu Leu Ser Pro Asp Pro Ser Ser	Ala Ser Ala Ala Pro Ile	
410	415	420
Gly Ser Gly Glu Asp Glu Val Gln Gln	Thr Ala Ala Arg Ile Ala	
425	430	435
Gly Ala Leu Gly Gly Leu Leu Thr Pro	Leu Phe Leu Arg Gly Val	
440	445	450
Leu Ala Tyr Leu Ile Trp Trp Thr Ala	Ala Cys Gln Leu Leu Ala	
455	460	465
Ser Leu Phe Gly Leu Tyr Phe His Gln	His Leu Ala Gly Ser	
470	475	

<210> 217
 <211> 574
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 5, 146
 <223> unknown base

<400> 217
 cgttngcagc cgtcaatggc ggtcctcgga gtacagctgg tggtagacct 50
 gctcactgcc accctcatgc acaggctggc gccacactgc tccttcgcgc 100
 gctggctgct ctgtaacggc agtttggtcc gatacaagca cccgtnttga 150
 ggaggagctt cgggccctgg cggggaagcc gagggccaga ggcaggaaag 200
 agcgggtgggc caatggcctt agtgaggaga agccactgtc tgtgccccga 250
 gatgccccgt tccagctgga gacctgcccc ctcacgaccg tggatgccct 300
 ggtcctgcgc ttcttctgga agtaccagtg gtttgtggac tttgctgtgt 350

actcgggcg cgtgtacctc ttcacagagg cctactacta catgctggga 400
ccagccaagg agactaacat tgctgtgttc tggcgcctgc tcacagtgc 450
cttctccatc aagatgttcc tgacagtgc acggctgtac ttcagcgccg 500
aggagggggg tgagcgctct gtctgcctca cctttgcctt cctcttcctg 550
ctgctggcca tgctggcgca agcg 574

<210> 218
<211> 2571
<212> DNA
<213> Homo sapiens

<400> 218
ggttcctaca tcctctcatc tgagaatcag agagcataat cttcttacgg 50
gcccgtgatt tattaacgtg gcttaatctg aaggtttctca gtcaaattct 100
ttgtgatcta ctgattgtgg gggcatggca aggtttgctt aaaggagctt 150
ggctgggttg ggccottgta gctgacagaa ggtggccagg gagaatgcag 200
cacactgctc ggagaatgaa ggcgcttctg ttgctggctt tgccctggct 250
cagtctgct aactacattg acaatgtggg caacctgcac ttctgtatt 300
cagaactctg taaagggtgc tccactacg gcctgaccaa agataggaag 350
aggcgctcac aagatggctg tccagacggc tgtgcgagcc tcacagccac 400
ggctccctcc ccagagggtt ctgcagctgc caccatctcc ttaatgacag 450
acgagcctgg cctagacaac cctgcctacg tgcctcggc agaggacggg 500
cagccagcaa tcagcccagt ggactctggc cggagcaacc gaactagggc 550
acggcccttt gagagatcca ctattagaag cagatcattt aaaaaataa 600
atcgagcttt gagtgttctt cgaaggacaa agagcgggag tgcagttgcc 650
aaccatgccg accagggcag ggaaaattct gaaaacacca ctgcccctga 700
agtctttcca aggttgtagc acctgattcc agatggtgaa attaccagca 750
tcaagatcaa tcgagtagat ccagtgaaa gcctctctat taggctgggtg 800
ggaggtagcg aaacccact ggtccatata attatccaac acatttatcg 850
tgatgggggtg atcgccagag acggccggct actgccagga gacatcattc 900
taaaggtaaa cgggatggac atcagcaatg tccctcaca ctacgctgtg 950
cgtctcctgc ggcagccctg ccaggtgctg tggctgactg tgatgcgtga 1000
acagaagttc cgcagcagga acaatggaca ggccccggat gcctacagac 1050
cccagatga cagctttcat gtgattctca aaaaagtag ccccgaggag 1100
cagcttgaaa taaaactggg gcgcaagggt gatgagcctg gggttttcat 1150
cttcaatgtg ctggatggcg gtgtggcata tcgacatggt cagcttgagg 1200

agaatgaccg tgtgttagcc atcaatggac atgatcttcg atatggcagc 1250
 ccagaaagtg cggctcatct gattcaggcc agtgaaagac gtgttcacct 1300
 cgtcgtgtcc cgccagggtc ggcagcggag ccctgacatc tttcaggaag 1350
 ccggctggaa cagcaatggc agctgggtccc cagggccagg ggagaggagc 1400
 aacctccca agcccccca tctacaatt acttgtcatg agaaggtggt 1450
 aaatatccaa aaagaccccg gtgaatctct cggcatgacc gtcgcagggg 1500
 gagcatcaca tagagaatgg gatttgccta tctatgtcat cagtgttgag 1550
 cccggaggag tcataagcag agatggaaga ataaaaacag gtgacatttt 1600
 gttgaatgtg gatggggctg aactgacaga ggtcagccgg agtgaggcag 1650
 tggcattatt gaaaagaaca tcatcctcga tagtactcaa agctttggaa 1700
 gtcaaagagt atgagcccca ggaagactgc agcagcccag cagccctgga 1750
 ctccaaccac aacatggccc caccagtgta ctgggtccca tcttgggtca 1800
 tgtggctgga attaccacgg tgcttgata actgtaaaga tattgtatta 1850
 cgaagaaaca cagctggaag tctgggcttc tgcattgtag gaggttatga 1900
 agaatacaat ggaaacaaac cttttttcat caaatccatt gttgaaggaa 1950
 caccagcata caatgatgga agaattagat gtggtgatat tcttcttgct 2000
 gtcaatggta gaagtacatc aggaatgata catgcttgct tggcaagact 2050
 gctgaaagaa cttaaaggaa gaattactct aactattgtt tcttggcctg 2100
 gcactttttt atagaatcaa tgatgggtca gaggaaaaca gaaaaatcac 2150
 aaataggcta agaagttgaa aactatatt tatcttgta gtttttatat 2200
 ttaaagaaag aatacattgt aaaaatgtca ggaaaagtat gatcatctaa 2250
 tgaaagccag ttacacctca gaaaatatga ttccaaaaaa attaaaacta 2300
 ctagtttttt ttcagtgtgg aggatttctc attactctac aacattgttt 2350
 atattttttc tattcaataa aaagccctaa aacaactaaa atgattgatt 2400
 tgtatacccc actgaattca agctgattta aattttaa attggtatatg 2450
 ctgaagtctg ccaagggtac attatggcca tttttaattt acagctaaaa 2500
 tattttttta aatgcattgc tgagaaacgt tgctttcatc aaacaagaat 2550
 aaatattttt cagaagttaa a 2571

<210> 219

<211> 632

<212> PRT

<213> Homo sapiens

<400> 219

Met Lys Ala Leu Leu Leu Leu Val Leu Pro Trp Leu Ser Pro Ala

1	5	10	15
Asn Tyr Ile Asp	Asn Val Gly Asn Leu His Phe Leu Tyr Ser Glu		
	20	25	30
Leu Cys Lys Gly	Ala Ser His Tyr Gly Leu Thr Lys Asp Arg Lys		
	35	40	45
Arg Arg Ser Gln	Asp Gly Cys Pro Asp Gly Cys Ala Ser Leu Thr		
	50	55	60
Ala Thr Ala Pro	Ser Pro Glu Val Ser Ala Ala Ala Thr Ile Ser		
	65	70	75
Leu Met Thr Asp	Glu Pro Gly Leu Asp Asn Pro Ala Tyr Val Ser		
	80	85	90
Ser Ala Glu Asp	Gly Gln Pro Ala Ile Ser Pro Val Asp Ser Gly		
	95	100	105
Arg Ser Asn Arg	Thr Arg Ala Arg Pro Phe Glu Arg Ser Thr Ile		
	110	115	120
Arg Ser Arg Ser	Phe Lys Lys Ile Asn Arg Ala Leu Ser Val Leu		
	125	130	135
Arg Arg Thr Lys	Ser Gly Ser Ala Val Ala Asn His Ala Asp Gln		
	140	145	150
Gly Arg Glu Asn	Ser Glu Asn Thr Thr Ala Pro Glu Val Phe Pro		
	155	160	165
Arg Leu Tyr His	Leu Ile Pro Asp Gly Glu Ile Thr Ser Ile Lys		
	170	175	180
Ile Asn Arg Val	Asp Pro Ser Glu Ser Leu Ser Ile Arg Leu Val		
	185	190	195
Gly Gly Ser Glu	Thr Pro Leu Val His Ile Ile Ile Gln His Ile		
	200	205	210
Tyr Arg Asp Gly	Val Ile Ala Arg Asp Gly Arg Leu Leu Pro Gly		
	215	220	225
Asp Ile Ile Leu	Lys Val Asn Gly Met Asp Ile Ser Asn Val Pro		
	230	235	240
His Asn Tyr Ala	Val Arg Leu Leu Arg Gln Pro Cys Gln Val Leu		
	245	250	255
Trp Leu Thr Val	Met Arg Glu Gln Lys Phe Arg Ser Arg Asn Asn		
	260	265	270
Gly Gln Ala Pro	Asp Ala Tyr Arg Pro Arg Asp Asp Ser Phe His		
	275	280	285
Val Ile Leu Asn	Lys Ser Ser Pro Glu Glu Gln Leu Gly Ile Lys		
	290	295	300
Leu Val Arg Lys	Val Asp Glu Pro Gly Val Phe Ile Phe Asn Val		
	305	310	315
Leu Asp Gly Gly	Val Ala Tyr Arg His Gly Gln Leu Glu Glu Asn		

	320		325		330
Asp Arg Val Leu	Ala Ile Asn Gly His	Asp Leu Arg Tyr Gly Ser			
	335	340			345
Pro Glu Ser Ala	Ala His Leu Ile Gln	Ala Ser Glu Arg Arg Val			
	350	355			360
His Leu Val Val	Ser Arg Gln Val Arg	Gln Arg Ser Pro Asp Ile			
	365	370			375
Phe Gln Glu Ala	Gly Trp Asn Ser Asn	Gly Ser Trp Ser Pro Gly			
	380	385			390
Pro Gly Glu Arg	Ser Asn Thr Pro Lys	Pro Leu His Pro Thr Ile			
	395	400			405
Thr Cys His Glu	Lys Val Val Asn Ile	Gln Lys Asp Pro Gly Glu			
	410	415			420
Ser Leu Gly Met	Thr Val Ala Gly Gly	Ala Ser His Arg Glu Trp			
	425	430			435
Asp Leu Pro Ile	Tyr Val Ile Ser Val	Glu Pro Gly Gly Val Ile			
	440	445			450
Ser Arg Asp Gly	Arg Ile Lys Thr Gly	Asp Ile Leu Leu Asn Val			
	455	460			465
Asp Gly Val Glu	Leu Thr Glu Val Ser	Arg Ser Glu Ala Val Ala			
	470	475			480
Leu Leu Lys Arg	Thr Ser Ser Ser Ile	Val Leu Lys Ala Leu Glu			
	485	490			495
Val Lys Glu Tyr	Glu Pro Gln Glu Asp	Cys Ser Ser Pro Ala Ala			
	500	505			510
Leu Asp Ser Asn	His Asn Met Ala Pro	Pro Ser Asp Trp Ser Pro			
	515	520			525
Ser Trp Val Met	Trp Leu Glu Leu Pro	Arg Cys Leu Tyr Asn Cys			
	530	535			540
Lys Asp Ile Val	Leu Arg Arg Asn Thr	Ala Gly Ser Leu Gly Phe			
	545	550			555
Cys Ile Val Gly	Gly Tyr Glu Glu Tyr	Asn Gly Asn Lys Pro Phe			
	560	565			570
Phe Ile Lys Ser	Ile Val Glu Gly Thr	Pro Ala Tyr Asn Asp Gly			
	575	580			585
Arg Ile Arg Cys	Gly Asp Ile Leu Leu	Ala Val Asn Gly Arg Ser			
	590	595			600
Thr Ser Gly Met	Ile His Ala Cys Leu	Ala Arg Leu Leu Lys Glu			
	605	610			615
Leu Lys Gly Arg	Ile Thr Leu Thr Ile	Val Ser Trp Pro Gly Thr			
	620	625			630
Phe Leu					

<210> 220
 <211> 773
 <212> DNA
 <213> Homo sapiens

<400> 220
 ccaaagtgat catttgaaaa agagatatcc acatcttcaa gcccatataa 50
 aggatagaag ctgcacaggg cagctttact tactccagca ccttcctctc 100
 ccaggcaaat ggtgctgacc atctttggga tacaatctca tggatacgag 150
 gtttttaaca tcatcagccc aagcaacaat ggtggcaatg ttcaggagac 200
 agtgacaatt gataatgaaa aaaataccgc catcgttaac atccatgcag 250
 gatcatgctc ttctaccaca atttttgact ataaacatgg ctacattgca 300
 tccaggggtgc tctcccgaag agcctgcttt atcctgaaga tggaccatca 350
 gaacatccct cctctgaaca atctccaatg gtacatctat gagaaacagg 400
 ctctggacaa catgttctcc aacaaatata cctgggtcaa gtacaaccct 450
 ctggagtctc tgatcaaaga cgtggattgg ttcctgcttg ggtcaccat 500
 tgagaaactc tgcaaacata tccctttgta taagggggaa gtggttgaaa 550
 acacacataa tgtcggtgct ggaggctgtg caaaggctgg gtcctgggc 600
 atcttgggaa tttcaatctg tgcagacatt catgtttagg atgattagcc 650
 ctcttgtttt atcttttcaa agaaatacat ccttggttta cactcaaaag 700
 tcaaattaaa ttctttccca atgccccaac taattttgag attcagtcag 750
 aaaatataaa tgctgtattt ata 773

<210> 221
 <211> 184
 <212> PRT
 <213> Homo sapiens

<400> 221
 Met Lys Ile Leu Val Ala Phe Leu Val Val Leu Thr Ile Phe Gly
 1 5 10 15
 Ile Gln Ser His Gly Tyr Glu Val Phe Asn Ile Ile Ser Pro Ser
 20 25 30
 Asn Asn Gly Gly Asn Val Gln Glu Thr Val Thr Ile Asp Asn Glu
 35 40 45
 Lys Asn Thr Ala Ile Val Asn Ile His Ala Gly Ser Cys Ser Ser
 50 55 60
 Thr Thr Ile Phe Asp Tyr Lys His Gly Tyr Ile Ala Ser Arg Val
 65 70 75
 Leu Ser Arg Arg Ala Cys Phe Ile Leu Lys Met Asp His Gln Asn
 80 85 90

Ile	Pro	Pro	Leu	Asn	Asn	Leu	Gln	Trp	Tyr	Ile	Tyr	Glu	Lys	Gln
				95					100					105
Ala	Leu	Asp	Asn	Met	Phe	Ser	Asn	Lys	Tyr	Thr	Trp	Val	Lys	Tyr
				110					115					120
Asn	Pro	Leu	Glu	Ser	Leu	Ile	Lys	Asp	Val	Asp	Trp	Phe	Leu	Leu
				125					130					135
Gly	Ser	Pro	Ile	Glu	Lys	Leu	Cys	Lys	His	Ile	Pro	Leu	Tyr	Lys
				140					145					150
Gly	Glu	Val	Val	Glu	Asn	Thr	His	Asn	Val	Gly	Ala	Gly	Gly	Cys
				155					160					165
Ala	Lys	Ala	Gly	Leu	Leu	Gly	Ile	Leu	Gly	Ile	Ser	Ile	Cys	Ala
				170					175					180

Asp Ile His Val

<210> 222
 <211> 992
 <212> DNA
 <213> Homo sapiens

<400> 222
 ggacagagcc aggaactagg aggttctcac tgcccagca gaggccctac 50
 acccaccgag gcatggggct cctgggctg ttctgcttgg ccgtgctggc 100
 tgccagcagc ttctccaagg cacgggagga agaaattacc cctgtggtct 150
 ccattgccta caaagtccctg gaagttttcc ccaaaggccg ctgggtgctc 200
 ataacctgct gtgcacccca gccaccaccg cccatcacct attccctctg 250
 tggaaccaag aacatcaagg tggccaagaa ggtggtgaag acccagcagc 300
 cggcctcctt caacctcaac gtcacactca agtccagtcc agacctgctc 350
 acctacttct gccgggcgtc ctccacctca ggtgcccatg tggacagtgc 400
 caggctacag atgcactggg agctgtggtc caagccagtg tctgagctgc 450
 gggccaactt cactctgcag gacagagggg caggccccag ggtggagatg 500
 atctgccagg cgtcctcggg cagcccacct atcaccaaca gcctgatcgg 550
 gaaggatggg caggtccacc tgcagcagag accatgccac aggcagcctg 600
 ccaacttctc ctctctgccg agccagacat cggactggtt ctggtgccag 650
 gctgcaaaca acgccaatgt ccagcacagc gccctcacag tggtgcccc 700
 aggtggtgac cagaagatgg aggactggca gggccccctg gagagcccca 750
 tccttgccct gccgctctac aggagcacc gccgtctgag tgaagaggag 800
 tttggggggg tcaggatagg gaatggggag gtcagaggac gcaaagcagc 850
 agccatgtag aatgaaccgt ccagagagcc aagcacggca gaggactgca 900

ggccatcagc gtgcactgtt cgtatttgga gttcatgcaa aatgagtgtg 950

ttttagctgc tcttgccaca aaaaaaaaaa aaaaaaaaaa aa 992

<210> 223

<211> 265

<212> PRT

<213> Homo sapiens

<400> 223

Met	Gly	Leu	Pro	Gly	Leu	Phe	Cys	Leu	Ala	Val	Leu	Ala	Ala	Ser	
1				5					10					15	
Ser	Phe	Ser	Lys	Ala	Arg	Glu	Glu	Glu	Ile	Thr	Pro	Val	Val	Ser	
				20					25					30	
Ile	Ala	Tyr	Lys	Val	Leu	Glu	Val	Phe	Pro	Lys	Gly	Arg	Trp	Val	
				35					40					45	
Leu	Ile	Thr	Cys	Cys	Ala	Pro	Gln	Pro	Pro	Pro	Pro	Ile	Thr	Tyr	
				50					55					60	
Ser	Leu	Cys	Gly	Thr	Lys	Asn	Ile	Lys	Val	Ala	Lys	Lys	Val	Val	
				65					70					75	
Lys	Thr	His	Glu	Pro	Ala	Ser	Phe	Asn	Leu	Asn	Val	Thr	Leu	Lys	
				80					85					90	
Ser	Ser	Pro	Asp	Leu	Leu	Thr	Tyr	Phe	Cys	Arg	Ala	Ser	Ser	Thr	
				95					100					105	
Ser	Gly	Ala	His	Val	Asp	Ser	Ala	Arg	Leu	Gln	Met	His	Trp	Glu	
				110					115					120	
Leu	Trp	Ser	Lys	Pro	Val	Ser	Glu	Leu	Arg	Ala	Asn	Phe	Thr	Leu	
				125					130					135	
Gln	Asp	Arg	Gly	Ala	Gly	Pro	Arg	Val	Glu	Met	Ile	Cys	Gln	Ala	
				140					145					150	
Ser	Ser	Gly	Ser	Pro	Pro	Ile	Thr	Asn	Ser	Leu	Ile	Gly	Lys	Asp	
				155					160					165	
Gly	Gln	Val	His	Leu	Gln	Gln	Arg	Pro	Cys	His	Arg	Gln	Pro	Ala	
				170					175					180	
Asn	Phe	Ser	Phe	Leu	Pro	Ser	Gln	Thr	Ser	Asp	Trp	Phe	Trp	Cys	
				185					190					195	
Gln	Ala	Ala	Asn	Asn	Ala	Asn	Val	Gln	His	Ser	Ala	Leu	Thr	Val	
				200					205					210	
Val	Pro	Pro	Gly	Gly	Asp	Gln	Lys	Met	Glu	Asp	Trp	Gln	Gly	Pro	
				215					220					225	
Leu	Glu	Ser	Pro	Ile	Leu	Ala	Leu	Pro	Leu	Tyr	Arg	Ser	Thr	Arg	
				230					235					240	
Arg	Leu	Ser	Glu	Glu	Glu	Phe	Gly	Gly	Phe	Arg	Ile	Gly	Asn	Gly	
				245					250					255	
Glu	Val	Arg	Gly	Arg	Lys	Ala	Ala	Ala	Met						
				260					265						

<210> 224
<211> 1297
<212> DNA
<213> Homo sapiens

<400> 224
ggtccttaat ggcagcagcc gccgctacca agatccttct gtgcctcccg 50
cttctgctcc tgctgtccgg ctggtcccgg gctgggagag ccgaccctca 100
ctctctttgc tatgacatca ccgtcatccc taagttcaga cctggaccac 150
ggtggtgtgc ggttcaaggc caggtggatg aaaagacttt tcttcactat 200
gactgtggca acaagacagt cacacctgtc agtcccctgg ggaagaaact 250
aatgtcaca acggcctgga aagcacagaa ccagtgactg agagaggtgg 300
tggacatact tacagagcaa ctgcgtgaca ttcagctgga gaattacaca 350
ccaaggaac ccctcaccct gcaggcaagg atgtcttgtg agcagaaagc 400
tgaaggacac agcagtggat cttggcagtt cagtttcgat gggcagatct 450
tcctcctctt tgactcagag aagagaatgt ggacaacggt tcatcctgga 500
gccagaaaga tgaaagaaaa gtgggagaat gacaaggttg tggccatgtc 550
cttcattac ttctcaatgg gagactgtat aggatggctt gaggacttct 600
tgatgggcat ggacagcacc ctggagccaa gtgcaggagc accactcgcc 650
atgtcctcag gcacaacca actcagggcc acagccacca ccctcatcct 700
ttgctgcctc ctcatcatcc tcccctgctt catcctccct ggcactctgag 750
gagagtcctt tagagtgaca ggttaaagct gatacaaaa ggctcctgtg 800
agcacggtct tgatcaaact cgcccttctg tctggccagc tgcccacgac 850
ctacggtgta tgtccagtgg cctccagcag atcatgatga catcatggac 900
ccaatagctc attcactgcc ttgattcctt ttgccaacaa ttttaccagc 950
agttatacct aacatattat gcaattttct cttggtgcta cctgatggaa 1000
ttcctgcact taaagtcttg gctgactaaa caagatatat cattttcttt 1050
cttctctttt tgtttggaaa atcaagtact tctttgaatg atgatctctt 1100
tcttgcaaata gatattgtca gtaaaataat cacgttagac ttcagacctc 1150
tggggattct ttccgtgtcc tgaaagagaa tttttaaaatt atttaataag 1200
aaaaaattta tattaatgat tgtttccttt agtaatttat tgttctgtac 1250
tgatatthaa ataaagagtt ctatttccca aaaaaaaaaa aaaaaaa 1297

<210> 225
<211> 246
<212> PRT
<213> Homo sapiens

<400> 225

```
Met Ala Ala Ala Ala Thr Lys Ile Leu Leu Cys Leu Pro Leu
 1          5          10          15
Leu Leu Leu Leu Ser Gly Trp Ser Arg Ala Gly Arg Ala Asp Pro
          20          25          30
His Ser Leu Cys Tyr Asp Ile Thr Val Ile Pro Lys Phe Arg Pro
          35          40          45
Gly Pro Arg Trp Cys Ala Val Gln Gly Gln Val Asp Glu Lys Thr
          50          55          60
Phe Leu His Tyr Asp Cys Gly Asn Lys Thr Val Thr Pro Val Ser
          65          70          75
Pro Leu Gly Lys Lys Leu Asn Val Thr Thr Ala Trp Lys Ala Gln
          80          85          90
Asn Pro Val Leu Arg Glu Val Val Asp Ile Leu Thr Glu Gln Leu
          95          100          105
Arg Asp Ile Gln Leu Glu Asn Tyr Thr Pro Lys Glu Pro Leu Thr
          110          115          120
Leu Gln Ala Arg Met Ser Cys Glu Gln Lys Ala Glu Gly His Ser
          125          130          135
Ser Gly Ser Trp Gln Phe Ser Phe Asp Gly Gln Ile Phe Leu Leu
          140          145          150
Phe Asp Ser Glu Lys Arg Met Trp Thr Thr Val His Pro Gly Ala
          155          160          165
Arg Lys Met Lys Glu Lys Trp Glu Asn Asp Lys Val Val Ala Met
          170          175          180
Ser Phe His Tyr Phe Ser Met Gly Asp Cys Ile Gly Trp Leu Glu
          185          190          195
Asp Phe Leu Met Gly Met Asp Ser Thr Leu Glu Pro Ser Ala Gly
          200          205          210
Ala Pro Leu Ala Met Ser Ser Gly Thr Thr Gln Leu Arg Ala Thr
          215          220          225
Ala Thr Thr Leu Ile Leu Cys Cys Leu Leu Ile Ile Leu Pro Cys
          230          235          240
Phe Ile Leu Pro Gly Ile
          245
```

<210> 226

<211> 735

<212> DNA

<213> Homo sapiens

<400> 226

gggaaagcca ttctgaaaac ccatctatac aaactatata ttttcatttc 50

tgctgctagc tgccttgggc ctcacaattt tcattctgtt ttctgacttt 100

caagttatat accgtggaat ggagttgatc ccaaccataa catcgtggag 150

gggtttaatt ttggtggtag ccctcaccga attctggtgt ggctttcttt 200
 gcagaggatt ccaccttcaa aatcatgaac tctggctgtt gatcaaaaga 250
 gaatttggat tctactctaa aagtcaatat aggacttggc aaaagaagct 300
 agcagaagac tcaacctggc ctcccataaa caggacagat tattcaggtg 350
 atggcaaaaa tggattctac atcaacggag gctatgaaag ccatgaacag 400
 attccaaaaa gaaaactcaa attggggaggc caaccacag aacagcattt 450
 ctgggccagg ctgtaatcag aattgtcgtc gtacatgctc aacagcattg 500
 cttttttccc caaaattaac acattgtgga gaagtgatga tactctcccc 550
 ttacctttcc tctctccatt caagcattca aagtatattt tcaatgaatt 600
 aaaccttgca gcaagggacc ttagataggc ttattctgac tgtatgcttt 650
 accaatgaga gaaaaaatg catttcctgt atcatccttt tcaataaact 700
 gtattcattt tgaaaaaaaa aaaaaaaaaa aaaaa 735

<210> 227
 <211> 115
 <212> PRT
 <213> Homo sapiens

<400> 227
 Met Glu Leu Ile Pro Thr Ile Thr Ser Trp Arg Val Leu Ile Leu
 1 5 10 15
 Val Val Ala Leu Thr Gln Phe Trp Cys Gly Phe Leu Cys Arg Gly
 20 25 30
 Phe His Leu Gln Asn His Glu Leu Trp Leu Leu Ile Lys Arg Glu
 35 40 45
 Phe Gly Phe Tyr Ser Lys Ser Gln Tyr Arg Thr Trp Gln Lys Lys
 50 55 60
 Leu Ala Glu Asp Ser Thr Trp Pro Pro Ile Asn Arg Thr Asp Tyr
 65 70 75
 Ser Gly Asp Gly Lys Asn Gly Phe Tyr Ile Asn Gly Gly Tyr Glu
 80 85 90
 Ser His Glu Gln Ile Pro Lys Arg Lys Leu Lys Leu Gly Gly Gln
 95 100 105
 Pro Thr Glu Gln His Phe Trp Ala Arg Leu
 110 115

<210> 228
 <211> 2185
 <212> DNA
 <213> Homo sapiens

<400> 228
 gttctccttt ccgagccaaa atcccaggcg atggtgaatt atgaacgtgc 50
 cacaccatga agctcttgtg gcaggtaact gtgcaccacc acacctggaa 100

tgccatcctg ctcccgttcg tctacctcac ggcgcaagtg tggattctgt 150
 gtgcagccat cgctgctgcc gcctcagccg ggccccagaa ctgcccctcc 200
 gtttgctcgt gcagtaacca gttcagcaag gtgggtgtgca cgcgccgggg 250
 cctctccgag gtcccgcagg gtattccctc gaacacccgg tacctcaacc 300
 tcatggagaa caacatccag atgatccagg ccgacacctt ccgccacctc 350
 caccacctgg aggtcctgca gtggggcagg aactccatcc ggagattga 400
 ggtggggggc ttcaacggcc tggccagcct caacaccctg gagctgttcg 450
 acaactggct gacagtcac cctagcgggg cctttgaata cctgtccaag 500
 ctgcgggagc tctggcttcg caacaacccc atcgaaagca tcccctctta 550
 cgccttcaac cgggtgccct ccctcatgag cctggacttg ggggagctca 600
 agaagctgga gtatatctct gagggagctt ttgaggggct gttcaacctc 650
 aagtatctga acttgggcat gtgcaacatt aaagacatgc ccaatctcac 700
 cccctggtg gggctggagg agctggagat gtcagggaac cacttccctg 750
 agatcaggcc tggctccttc catggcctga gctccctcaa gaagctctgg 800
 gtcatgaact cacaggtcag cctgattgag cggaatgctt ttgacgggct 850
 ggcttcactt gtggaactca acttggccca caataacctc tcttctttgc 900
 cccatgacct ctttaccctg ctgaggtacc tgggtggagt gcatctacac 950
 cacaaccctt ggaactgtga ttgtgacatt ctgtggctag cctggtggct 1000
 tcgagagtat ataccaccca attccacctg ctgtggccgc tgcattgctc 1050
 ccattgcacat gcgaggccgc tacctcgtgg aggtggacca ggctccttc 1100
 cagtgtcttg ccccttcac catggacgca cctcgagacc tcaacatttc 1150
 tgagggctcg atggcagaac ttaagtgtcg gactccccct atgtcctccg 1200
 tgaagtgggt gctgcccaat gggacagtgc tcagccacgc ctcccgccac 1250
 ccaaggatct ctgtcctcaa cgacggcacc ttgaactttt cccacgtgct 1300
 gctttcagac actgggggtg acacatgcat ggtgaccaat gttgcaggca 1350
 actccaacgc ctcggcctac ctcaatgtga gcacggctga gcttaacacc 1400
 tccaactaca gcttcttcac cacagtaaca gtggagacca cggagatctc 1450
 gcctgaggac acaacgcgaa agtacaagcc tgttcctacc acgtccactg 1500
 gttaccagcc ggcataatcc acctatacca cgggtgctcat tcagactacc 1550
 cgtgtgcca agcaggtggc agtaccgcg acagacacca ctgacaagat 1600
 gcagaccagc ctggatgaag tcatgaagac caccaagatc atcattggct 1650
 gctttgtggc agtgactctg ctgactgccg ccattgtgat tgtcttctat 1700

aaacttcgta agcggcacca gcagcggagt acagtcacag ccgcccggac 1750
 tgttgagata atccagggtg acgaagacat cccagcagca acatccgcag 1800
 cagcaacagc agctccgtcc ggtgtatcag gtgagggggc agtagtgctg 1850
 cccacaattc atgaccatat taactacaac acctacaaac cagcacatgg 1900
 ggcccactgg acagaaaaca gcctggggaa ctctctgcac cccacagtca 1950
 ccactatctc tgaaccttat ataattcaga cccataccaa ggacaaggta 2000
 caggaaactc aaatatgact cccctcccc aaaaaactta taaaatgcaa 2050
 tagaatgcac acaaagacag caacttttgt acagagtggg gagagacttt 2100
 ttcttgata tgottatata ttaagtctat gggctgggta aaaaaaacag 2150
 attatattaa aatttaaaga caaaaagtca aaaca 2185

<210> 229
 <211> 653
 <212> PRT
 <213> Homo sapiens

<400> 229
 Met Lys Leu Leu Trp Gln Val Thr Val His His His Thr Trp Asn
 1 5 10 15
 Ala Ile Leu Leu Pro Phe Val Tyr Leu Thr Ala Gln Val Trp Ile
 20 25 30
 Leu Cys Ala Ala Ile Ala Ala Ala Ala Ser Ala Gly Pro Gln Asn
 35 40 45
 Cys Pro Ser Val Cys Ser Cys Ser Asn Gln Phe Ser Lys Val Val
 50 55 60
 Cys Thr Arg Arg Gly Leu Ser Glu Val Pro Gln Gly Ile Pro Ser
 65 70 75
 Asn Thr Arg Tyr Leu Asn Leu Met Glu Asn Asn Ile Gln Met Ile
 80 85 90
 Gln Ala Asp Thr Phe Arg His Leu His His Leu Glu Val Leu Gln
 95 100 105
 Leu Gly Arg Asn Ser Ile Arg Gln Ile Glu Val Gly Ala Phe Asn
 110 115 120
 Gly Leu Ala Ser Leu Asn Thr Leu Glu Leu Phe Asp Asn Trp Leu
 125 130 135
 Thr Val Ile Pro Ser Gly Ala Phe Glu Tyr Leu Ser Lys Leu Arg
 140 145 150
 Glu Leu Trp Leu Arg Asn Asn Pro Ile Glu Ser Ile Pro Ser Tyr
 155 160 165
 Ala Phe Asn Arg Val Pro Ser Leu Met Arg Leu Asp Leu Gly Glu
 170 175 180
 Leu Lys Lys Leu Glu Tyr Ile Ser Glu Gly Ala Phe Glu Gly Leu

	185		190		195
Phe Asn Leu Lys Tyr	Leu Asn Leu Gly	Met Cys Asn Ile Lys	Asp		
200		205	210		
Met Pro Asn Leu Thr	Pro Leu Val Gly	Leu Glu Glu Leu Glu	Met		
215		220	225		
Ser Gly Asn His Phe	Pro Glu Ile Arg	Pro Gly Ser Phe His	Gly		
230		235	240		
Leu Ser Ser Leu Lys	Lys Leu Trp Val	Met Asn Ser Gln Val	Ser		
245		250	255		
Leu Ile Glu Arg Asn	Ala Phe Asp Gly	Leu Ala Ser Leu Val	Glu		
260		265	270		
Leu Asn Leu Ala His	Asn Asn Leu Ser	Ser Leu Pro His Asp	Leu		
275		280	285		
Phe Thr Pro Leu Arg	Tyr Leu Val Glu	Leu His Leu His His	Asn		
290		295	300		
Pro Trp Asn Cys Asp	Cys Asp Ile Leu Trp	Leu Ala Trp Trp	Leu		
305		310	315		
Arg Glu Tyr Ile Pro	Thr Asn Ser Thr	Cys Cys Gly Arg Cys	His		
320		325	330		
Ala Pro Met His Met	Arg Gly Arg Tyr	Leu Val Glu Val Asp	Gln		
335		340	345		
Ala Ser Phe Gln Cys	Ser Ala Pro Phe	Ile Met Asp Ala Pro	Arg		
350		355	360		
Asp Leu Asn Ile Ser	Glu Gly Arg Met	Ala Glu Leu Lys Cys	Arg		
365		370	375		
Thr Pro Pro Met Ser	Ser Val Lys Trp	Leu Leu Pro Asn Gly	Thr		
380		385	390		
Val Leu Ser His Ala	Ser Arg His Pro	Arg Ile Ser Val Leu	Asn		
395		400	405		
Asp Gly Thr Leu Asn	Phe Ser His Val	Leu Leu Ser Asp Thr	Gly		
410		415	420		
Val Tyr Thr Cys Met	Val Thr Asn Val	Ala Gly Asn Ser Asn	Ala		
425		430	435		
Ser Ala Tyr Leu Asn	Val Ser Thr Ala	Glu Leu Asn Thr Ser	Asn		
440		445	450		
Tyr Ser Phe Phe Thr	Thr Val Thr Val	Glu Thr Thr Glu Ile	Ser		
455		460	465		
Pro Glu Asp Thr Thr	Arg Lys Tyr Lys	Pro Val Pro Thr Thr	Ser		
470		475	480		
Thr Gly Tyr Gln Pro	Ala Tyr Thr Thr	Ser Thr Thr Val Leu	Ile		
485		490	495		
Gln Thr Thr Arg Val	Pro Lys Gln Val	Ala Val Pro Ala Thr	Asp		

	500		505		510
Thr Thr Asp Lys	Met Gln Thr Ser Leu	Asp Glu Val Met Lys	Thr		
	515		520		525
Thr Lys Ile Ile	Ile Gly Cys Phe Val	Ala Val Thr Leu Leu	Ala		
	530		535		540
Ala Ala Met Leu	Ile Val Phe Tyr Lys	Leu Arg Lys Arg His	Gln		
	545		550		555
Gln Arg Ser Thr	Val Thr Ala Ala Arg	Thr Val Glu Ile Ile	Gln		
	560		565		570
Val Asp Glu Asp	Ile Pro Ala Ala Thr	Ser Ala Ala Ala Thr	Ala		
	575		580		585
Ala Pro Ser Gly	Val Ser Gly Glu Gly	Ala Val Val Leu Pro	Thr		
	590		595		600
Ile His Asp His	Ile Asn Tyr Asn Thr	Tyr Lys Pro Ala His	Gly		
	605		610		615
Ala His Trp Thr	Glu Asn Ser Leu Gly	Asn Ser Leu His Pro	Thr		
	620		625		630
Val Thr Thr Ile	Ser Glu Pro Tyr Ile	Ile Gln Thr His Thr	Lys		
	635		640		645
Asp Lys Val Gln	Glu Thr Gln Ile				
	650				

<210> 230
 <211> 2846
 <212> DNA
 <213> Homo sapiens

<400> 230
 cgctcgggca ccagccgcgg caaggatgga gctgggttgc tggacgcagt 50
 tggggctcac ttttcttcag ctcccttctca tctcgtcctt gccaaagagag 100
 tacacagtca ttaatgaagc ctgccctgga gcagagtgga atatcatgtg 150
 tcgggagtgc tgtgaatatg atcagattga gtgcgtctgc cccggaaaga 200
 gggaagtcgt gggttatacc atcccttgct gcaggaatga ggagaatgag 250
 tgtgactcct gcctgatcca cccaggttgt accatctttg aaaactgcaa 300
 gagctgocga aatggctcat gggggggtac cttggatgac ttctatgtga 350
 aggggttcta ctgtgcagag tgccgagcag gctggtacgg aggagactgc 400
 atgcgatgtg gccaggttct gcgagcccca aagggtcaga ttttgttgga 450
 aagctatccc ctaaagtctc actgtgaatg gaccattcat gctaaacctg 500
 ggtttgtcat ccaactaaga tttgtcatgt tgagtctgga gtttgactac 550
 atgtgccagt atgactatgt tgaggttcgt gatggagaca accgcgatgg 600
 ccagatcacc aagcgtgtct gtggcaacga gcggccagct cctatccaga 650

gcataggatc ctcactccac gtcctcttcc actcogatgg ctccaagaat 700
 tttgacgggt tccatgccat ttatgaggag atcacagcat gtcctcatc 750
 cccttgtttc catgacggca cgtgcgtcct tgacaaggct ggatcttaca 800
 agtgtgcctg cttggcaggc tatactgggc agcgtgtga aaatctcctt 850
 gaagaaagaa actgctcaga ccctgggggc ccagtcaatg ggtaccagaa 900
 aataacaggg ggccctgggc ttatcaacgg acgccatgct aaaattggca 950
 ccgtggtgtc tttcttttgt aacaactcct atgttcttag tggcaatgag 1000
 aaaagaactt gccagcagaa tggagagtgg tcagggaac agcccatctg 1050
 cataaaagcc tgccgagaac caaagatttc agacctggtg agaaggagag 1100
 ttcttccgat gcaggttcag tcaagggaga caccattaca ccagctatac 1150
 tcagcggcct tcagcaagca gaaactgcag agtgcccta ccaagaagcc 1200
 agcccttccc tttggagatc tgcccatggg ataccaacat ctgcataccc 1250
 agctccagta tgagtgcac tcaccttct accgcgcct gggcagcagc 1300
 aggaggacat gtctgaggac tgggaagtgg agtgggcggg caccatcctg 1350
 catccctatc tgcgggaaaa ttgagaacat cactgctcca aagacccaag 1400
 ggttgcgctg gccgtggcag gcagccatct acaggaggac cagcggggtg 1450
 catgacggca gcctacacaa gggagcgtgg ttcttagtct gcagcgtgtc 1500
 cctggtgaat gagegcactg tgggtgtggc tgccaactgt gttactgacc 1550
 tggggaaggt caccatgatc aagacagcag acctgaaagt tgttttggg 1600
 aaattctacc gggatgatga ccgggatgag aagaccatcc agagcctaca 1650
 gattttctgt atcattctgc atcccaacta tgacccatc ctgcttgatg 1700
 ctgacatcgc catcctgaag ctctagaca aggccgtat cagcaccga 1750
 gtccagccca tctgcctcgc tgccagtcgg gatctcagca cttccttcca 1800
 ggagtcccac atcactgtgg ctggctggaa tgtcctggca gacgtgagga 1850
 gccctggett caagaacgac aactgcgt ctggggtggg cagtgtggtg 1900
 gactcgtgc tgtgtgagga gcagcatgag gacctggca tcccagtga 1950
 tgactgat aacatgttct gtgccagctg ggaaccact gcccttctg 2000
 atatctgcac tgcagagaca ggaggcatcg cggtgtgtc cttcccggga 2050
 cgagcatctc ctgagccacg ctggcatctg atgggaactg tcagctggag 2100
 ctatgataaa acatgcagcc acaggctctc cactgccttc accaaggtgc 2150
 tgccttttaa agactggatt gaaagaaata tgaaatgaac catgctcatg 2200
 cactccttga gaagtgttc tgtatatccg tctgtacgtg tgtcattgag 2250

tgaagcagtg tgggcctgaa gtgtgatttg gcctgtgaac ttggctgtgc 2300
cagggcttct gacttcaggg acaaaactca gtgaaggggtg agtagacctc 2350
cattgctgggt aggctgatgc cgcgtccact actaggacag ccaattggaa 2400
gatgccaggg cttgcaagaa gtaagtttct tcaaagaaga ccatatacaa 2450
aacctctoca ctccactgac ctggtggtct tccccaaactt tcagttatac 2500
gaatgccatc agcttgacca gggaagatct gggcttcatg aggccctttt 2550
tgaggctctc aagttctaga gagctgcctg tgggacagcc cagggcagca 2600
gagctgggat gtggtgcatg cctttgtgta catggccaca gtacagtctg 2650
gtccttttcc ttcccatct cttgtacaca ttttaataaa ataagggttg 2700
gcttctgaac tacaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2750
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2800
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 2846

<210> 231
<211> 720
<212> PRT
<213> Homo sapiens

<400> 231
Met Glu Leu Gly Cys Trp Thr Gln Leu Gly Leu Thr Phe Leu Gln
1 5 10 15
Leu Leu Leu Ile Ser Ser Leu Pro Arg Glu Tyr Thr Val Ile Asn
20 25 30
Glu Ala Cys Pro Gly Ala Glu Trp Asn Ile Met Cys Arg Glu Cys
35 40 45
Cys Glu Tyr Asp Gln Ile Glu Cys Val Cys Pro Gly Lys Arg Glu
50 55 60
Val Val Gly Tyr Thr Ile Pro Cys Cys Arg Asn Glu Glu Asn Glu
65 70 75
Cys Asp Ser Cys Leu Ile His Pro Gly Cys Thr Ile Phe Glu Asn
80 85 90
Cys Lys Ser Cys Arg Asn Gly Ser Trp Gly Gly Thr Leu Asp Asp
95 100 105
Phe Tyr Val Lys Gly Phe Tyr Cys Ala Glu Cys Arg Ala Gly Trp
110 115 120
Tyr Gly Gly Asp Cys Met Arg Cys Gly Gln Val Leu Arg Ala Pro
125 130 135
Lys Gly Gln Ile Leu Leu Glu Ser Tyr Pro Leu Asn Ala His Cys
140 145 150
Glu Trp Thr Ile His Ala Lys Pro Gly Phe Val Ile Gln Leu Arg
155 160 165

Phe Val Met Leu Ser Leu Glu Phe Asp Tyr Met Cys Gln Tyr Asp	170	175	180
Tyr Val Glu Val Arg Asp Gly Asp Asn Arg Asp Gly Gln Ile Ile	185	190	195
Lys Arg Val Cys Gly Asn Glu Arg Pro Ala Pro Ile Gln Ser Ile	200	205	210
Gly Ser Ser Leu His Val Leu Phe His Ser Asp Gly Ser Lys Asn	215	220	225
Phe Asp Gly Phe His Ala Ile Tyr Glu Glu Ile Thr Ala Cys Ser	230	235	240
Ser Ser Pro Cys Phe His Asp Gly Thr Cys Val Leu Asp Lys Ala	245	250	255
Gly Ser Tyr Lys Cys Ala Cys Leu Ala Gly Tyr Thr Gly Gln Arg	260	265	270
Cys Glu Asn Leu Leu Glu Glu Arg Asn Cys Ser Asp Pro Gly Gly	275	280	285
Pro Val Asn Gly Tyr Gln Lys Ile Thr Gly Gly Pro Gly Leu Ile	290	295	300
Asn Gly Arg His Ala Lys Ile Gly Thr Val Val Ser Phe Phe Cys	305	310	315
Asn Asn Ser Tyr Val Leu Ser Gly Asn Glu Lys Arg Thr Cys Gln	320	325	330
Gln Asn Gly Glu Trp Ser Gly Lys Gln Pro Ile Cys Ile Lys Ala	335	340	345
Cys Arg Glu Pro Lys Ile Ser Asp Leu Val Arg Arg Arg Val Leu	350	355	360
Pro Met Gln Val Gln Ser Arg Glu Thr Pro Leu His Gln Leu Tyr	365	370	375
Ser Ala Ala Phe Ser Lys Gln Lys Leu Gln Ser Ala Pro Thr Lys	380	385	390
Lys Pro Ala Leu Pro Phe Gly Asp Leu Pro Met Gly Tyr Gln His	395	400	405
Leu His Thr Gln Leu Gln Tyr Glu Cys Ile Ser Pro Phe Tyr Arg	410	415	420
Arg Leu Gly Ser Ser Arg Arg Thr Cys Leu Arg Thr Gly Lys Trp	425	430	435
Ser Gly Arg Ala Pro Ser Cys Ile Pro Ile Cys Gly Lys Ile Glu	440	445	450
Asn Ile Thr Ala Pro Lys Thr Gln Gly Leu Arg Trp Pro Trp Gln	455	460	465
Ala Ala Ile Tyr Arg Arg Thr Ser Gly Val His Asp Gly Ser Leu	470	475	480

His	Lys	Gly	Ala	Trp	Phe	Leu	Val	Cys	Ser	Gly	Ala	Leu	Val	Asn
				485					490					495
Glu	Arg	Thr	Val	Val	Val	Ala	Ala	His	Cys	Val	Thr	Asp	Leu	Gly
				500					505					510
Lys	Val	Thr	Met	Ile	Lys	Thr	Ala	Asp	Leu	Lys	Val	Val	Leu	Gly
				515					520					525
Lys	Phe	Tyr	Arg	Asp	Asp	Asp	Arg	Asp	Glu	Lys	Thr	Ile	Gln	Ser
				530					535					540
Leu	Gln	Ile	Ser	Ala	Ile	Ile	Leu	His	Pro	Asn	Tyr	Asp	Pro	Ile
				545					550					555
Leu	Leu	Asp	Ala	Asp	Ile	Ala	Ile	Leu	Lys	Leu	Leu	Asp	Lys	Ala
				560					565					570
Arg	Ile	Ser	Thr	Arg	Val	Gln	Pro	Ile	Cys	Leu	Ala	Ala	Ser	Arg
				575					580					585
Asp	Leu	Ser	Thr	Ser	Phe	Gln	Glu	Ser	His	Ile	Thr	Val	Ala	Gly
				590					595					600
Trp	Asn	Val	Leu	Ala	Asp	Val	Arg	Ser	Pro	Gly	Phe	Lys	Asn	Asp
				605					610					615
Thr	Leu	Arg	Ser	Gly	Val	Val	Ser	Val	Val	Asp	Ser	Leu	Leu	Cys
				620					625					630
Glu	Glu	Gln	His	Glu	Asp	His	Gly	Ile	Pro	Val	Ser	Val	Thr	Asp
				635					640					645
Asn	Met	Phe	Cys	Ala	Ser	Trp	Glu	Pro	Thr	Ala	Pro	Ser	Asp	Ile
				650					655					660
Cys	Thr	Ala	Glu	Thr	Gly	Gly	Ile	Ala	Ala	Val	Ser	Phe	Pro	Gly
				665					670					675
Arg	Ala	Ser	Pro	Glu	Pro	Arg	Trp	His	Leu	Met	Gly	Leu	Val	Ser
				680					685					690
Trp	Ser	Tyr	Asp	Lys	Thr	Cys	Ser	His	Arg	Leu	Ser	Thr	Ala	Phe
				695					700					705
Thr	Lys	Val	Leu	Pro	Phe	Lys	Asp	Trp	Ile	Glu	Arg	Asn	Met	Lys
				710					715					720

<210> 232

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 232

aggttcgtga tggagacaac cgcg 24

<210> 233

<211> 24

<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 233
tgtcaaggac gcaactgccgt catg 24

<210> 234
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 234
tggccagatc atcaagcgtg tctgtggcaa cgagcggcca gctcctatcc 50

<210> 235
<211> 1964
<212> DNA
<213> Homo sapiens

<400> 235
accaggcatt gtatcttcag ttgtcatcaa gttcgcaatc agattggaaa 50
agctcaactt gaagctttct tgcctgcagt gaagcagaga gatagatatt 100
attcacgtaa taaaaaacat gggcttcaac ctgactttcc acctttccta 150
caaattccga ttactgttgc tgttgacttt gtgcctgaca gtggttgggt 200
gggccaccag taactacttc gtgggtgccca ttcaagagat tcctaaagca 250
aaggagtcca tggctaattt ccataagacc ctcatcttgg ggaaggga 300
aactctgact aatgaagcat ccacgaagaa ggtagaactt gacaactgtc 350
cttctgtgtc tccttacctc agaggccaga gcaagctcat tttcaaacca 400
gatctcactt tggaagaggt acaggcagaa aatcccaaag tgtccagagg 450
ccggtatcgc cctcaggaat gtaaagcttt acagagggtc gccatcctcg 500
ttccccaccg gaacagagag aaacacctga tgtacctgct ggaacatctg 550
catcccttcc tgcagaggca gcagctggat tatggcatct acgtcatcca 600
ccaggctgaa ggtaaaaagt ttaatcgagc caaactcttg aatgtgggct 650
atctagaagc cctcaaggaa gaaaattggg actgctttat attccacgat 700
gtggacctgg taccogagaa tgactttaac ctttacaagt gtgaggagca 750
tccaagcat ctggtgggtt gcaggaacag cactgggtac aggttacgtt 800
acagtggata ttttgggggg gttactgcc taagcagaga gcagtttttc 850
aaggatgaat gattctctaa caactactgg ggatggggag gcgaagacga 900
tgacctcaga ctcagggttg agctccaaag aatgaaaatt tcccgcccc 950
tgctgaagt gggtaaatat acaatgtct tccacactag agacaaagc 1000

aatgagggtga acgcagaacg gatgaagctc ttacaccaag tgtcacgagt 1050
 ctggagaaca gatgggttga gtagttgttc ttataaatta gtatctgtgg 1100
 aacacaatcc tttatatatc aacatcacag tggatttctg gtttggtgca 1150
 tgaccctgga tcttttggtg atgtttggaa gaactgattc tttgtttgca 1200
 ataatttttg cctagagact tcaaatagta gcacacatta agaacctgtt 1250
 acagctcatt gttgagctga atttttcctt tttgtatttt cttagcagag 1300
 ctcttggtga tgtagagtat aaaacagttg taacaagaca gctttcttag 1350
 tcattttgat catgagggtt aaatattgta atatggatac ttgaaggact 1400
 ttatataaaa ggatgactca aaggataaaa tgaacgctat ttgaggactc 1450
 tggttgaagg agattttattt aaatttgaag taatatatta tgggataaaa 1500
 ggccacagga aataagactg ctgaatgtct gagagaacca gagttgttct 1550
 cgtccaaggt agaaaggtag gaagatacaa tactgttatt catttatoct 1600
 gtacaatcat ctgtgaagtg gtggtgtcag gtgagaaggc gtccacaaaa 1650
 gaggggagaa aaggcgacga atcaggacac agtgaacttg ggaatgaaga 1700
 ggtagcagga gggtagagtg tcggctgcaa aggcagcagt agctgagctg 1750
 gttgcaggtg ctgatagcct tcaggggagg acctgcccag gtatgccttc 1800
 cagtgatgcc caccagagaa tacattctct attagttttt aaagagtttt 1850
 tgtaaaatga ttttgtacaa gtaggatatg aattagcagt ttacaagttt 1900
 acatattaac taataataaa tatgtctatc aaatacctct gtagtaaaat 1950
 gtgaaaaagc aaaa 1964

<210> 236
 <211> 344
 <212> PRT
 <213> Homo sapiens

<220>
 <221> Signal peptide
 <222> 1-27
 <223> Signal peptide

<220>
 <221> N-glycosylation sites
 <222> 4-7, 220-223, 335-338
 <223> N-glycosylation sites

<220>
 <221> Xylose isomerase proteins
 <222> 191-201
 <223> Xylose isomerase proteins

<400> 236
 Met Gly Phe Asn Leu Thr Phe His Leu Ser Tyr Lys Phe Arg Leu
 1 5 10 15

Leu	Leu	Leu	Leu	Thr	Leu	Cys	Leu	Thr	Val	Val	Gly	Trp	Ala	Thr		20	25	30
Ser	Asn	Tyr	Phe	Val	Gly	Ala	Ile	Gln	Glu	Ile	Pro	Lys	Ala	Lys		35	40	45
Glu	Phe	Met	Ala	Asn	Phe	His	Lys	Thr	Leu	Ile	Leu	Gly	Lys	Gly		50	55	60
Lys	Thr	Leu	Thr	Asn	Glu	Ala	Ser	Thr	Lys	Lys	Val	Glu	Leu	Asp		65	70	75
Asn	Cys	Pro	Ser	Val	Ser	Pro	Tyr	Leu	Arg	Gly	Gln	Ser	Lys	Leu		80	85	90
Ile	Phe	Lys	Pro	Asp	Leu	Thr	Leu	Glu	Glu	Val	Gln	Ala	Glu	Asn		95	100	105
Pro	Lys	Val	Ser	Arg	Gly	Arg	Tyr	Arg	Pro	Gln	Glu	Cys	Lys	Ala		110	115	120
Leu	Gln	Arg	Val	Ala	Ile	Leu	Val	Pro	His	Arg	Asn	Arg	Glu	Lys		125	130	135
His	Leu	Met	Tyr	Leu	Leu	Glu	His	Leu	His	Pro	Phe	Leu	Gln	Arg		140	145	150
Gln	Gln	Leu	Asp	Tyr	Gly	Ile	Tyr	Val	Ile	His	Gln	Ala	Glu	Gly		155	160	165
Lys	Lys	Phe	Asn	Arg	Ala	Lys	Leu	Leu	Asn	Val	Gly	Tyr	Leu	Glu		170	175	180
Ala	Leu	Lys	Glu	Glu	Asn	Trp	Asp	Cys	Phe	Ile	Phe	His	Asp	Val		185	190	195
Asp	Leu	Val	Pro	Glu	Asn	Asp	Phe	Asn	Leu	Tyr	Lys	Cys	Glu	Glu		200	205	210
His	Pro	Lys	His	Leu	Val	Val	Gly	Arg	Asn	Ser	Thr	Gly	Tyr	Arg		215	220	225
Leu	Arg	Tyr	Ser	Gly	Tyr	Phe	Gly	Gly	Val	Thr	Ala	Leu	Ser	Arg		230	235	240
Glu	Gln	Phe	Phe	Lys	Val	Asn	Gly	Phe	Ser	Asn	Asn	Tyr	Trp	Gly		245	250	255
Trp	Gly	Gly	Glu	Asp	Asp	Asp	Leu	Arg	Leu	Arg	Val	Glu	Leu	Gln		260	265	270
Arg	Met	Lys	Ile	Ser	Arg	Pro	Leu	Pro	Glu	Val	Gly	Lys	Tyr	Thr		275	280	285
Met	Val	Phe	His	Thr	Arg	Asp	Lys	Gly	Asn	Glu	Val	Asn	Ala	Glu		290	295	300
Arg	Met	Lys	Leu	Leu	His	Gln	Val	Ser	Arg	Val	Trp	Arg	Thr	Asp		305	310	315
Gly	Leu	Ser	Ser	Cys	Ser	Tyr	Lys	Leu	Val	Ser	Val	Glu	His	Asn		320	325	330

Pro Leu Tyr Ile Asn Ile Thr Val Asp Phe Trp Phe Gly Ala
335 340

<210> 237
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 237
ccttacctca gaggccagag caagc 25

<210> 238
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 238
gagcttcacgc cgttctgcgt tcacc 25

<210> 239
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 239
caggaatgta aagctttaca gagggtcgcc atcctcgttc cccacc 46

<210> 240
<211> 2567
<212> DNA
<213> Homo sapiens

<400> 240
cgtgggcccgg ggtcgcgcag cgggctgtgg gcgcgcccgg aggagcgcacc 50
gccgcagttc tcgagctcca gctgcattcc ctccgcgtcc gccccacgct 100
tctcccgcctc cgggccccgc aatggcccag gcagtgtggt cgcgcctcgg 150
ccgcatactc tggtttgcct gcctcctgcc ctgggccccg gcaggggtgg 200
ccgcaggcct gtatgaactc aatctcacca ccgatagccc tgccaccacg 250
ggagcgggtg tgaccatctc ggccagcctg gtggccaagg acaacggcag 300
cctggccctg cccgctgacg cccacctcta ccgcttccac tggatccaca 350
ccccgctggt gcttactggc aagatggaga agggctctcag ctccaccatc 400
cgtgtggtcg gccacgtgcc cggggaattc ccggtctctg tctgggtcac 450
tgccgctgac tgctggatgt gccagcctgt ggccaggggc tttgtgttcc 500
tccccatcac agagtctctc gtggggggacc ttgttgtcac ccagaacact 550

tccctaccct ggcccagctc ctatctcact aagaccgtcc tgaaagtctc 600
 cttcctcctc cagcaccga gcaacttcct caagaccgcc ttgtttctct 650
 acagctggga cttcggggac gggaccacaga tggtgactga agactccgtg 700
 gtctattata actattccat catcgggacc ttcaccgtga agctcaaagt 750
 ggtggcggag tgggaagagg tggagccgga tgccacgagg gctgtgaagc 800
 agaagaccgg ggacttctcc gcctcgtga agctgcagga aacccttcga 850
 ggcattcaag tgttggggcc caccctaatt cagaccctcc aaaagatgac 900
 cgtgaccttg aacttcctgg ggagccctcc tctgactgtg tgctggcgtc 950
 tcaagcctga gtgcctcccc ctggaggaaag gggagtgoa ccctgtgtcc 1000
 gtggccagca cagcgtacaa cctgaccac accctcaggg accctgggga 1050
 ctactgcttc agcatccggg ccgagaatat catcagcaag acacatcagt 1100
 accacaagat ccagggtgtg ccctccagaa tccagccggc tgtctttgct 1150
 ttcccatgtg ctacacttat cactgtgatg ttggccttca tcatgtacat 1200
 gaccctgcgg aatgccactc agcaaaagga catggtggag aaccgggagc 1250
 caccctctgg ggtcagggtc tgctgccaga tgtgctgtgg gcctttcttg 1300
 ctggagactc catctgagta cctggaaatt gttcgtgaga accacgggct 1350
 gctcccgccc ctctataagt ctgtcaaac ttacaccgtg tgagcactcc 1400
 ccctcccccac cccatctcag tggttaactga ctgctgactt ggagtttcca 1450
 gcagggtggt gtgcaccact gaccaggagg ggttcatttg cgtggggctg 1500
 ttggcctgga tcatccatcc atctgtacag ttcagccact gccacaagcc 1550
 cctccctctc tgtaaccctc gacccagcc attcaccat ctgtacagtc 1600
 cagccactga cataagcccc actcggttac caccctcttg acccctacc 1650
 tttgaagagg ctctgtgcag gactttgatg cttgggggtg tccgtgttga 1700
 ctctaggtg ggctggctg cccactgcc attcctctca tattggcaca 1750
 tctgctgtcc attgggggtt ctgagtttcc tccccagac agccctacct 1800
 gtgccagaga gctagaaaga aggtcataaa ggggttaaaaa tccataacta 1850
 aaggttgtac acatagatgg gcacactcac agagagaagt gtgcatgtac 1900
 acacaccaca cacacacaca cacacacaca cacagaaata taaacacatg 1950
 cgtcacatgg gcatttcaga tgatcagctc tgtatctggt taagtcgggt 2000
 gctgggatgc accctgcact agagctgaaa ggaaatttga cctccaagca 2050
 gccctgacag gttctgggccc cgggcctcc ctttgtgctt tgtctctgca 2100
 gttcttgccc cttttataag gccatcctag tccctgctgg ctggcagggg 2150

cctggatggg gggcaggact aatactgagt gattgcagag tgctttataa 2200
 atatcacott attttatcga aacccatctg tgaaactttc actgaggaaa 2250
 aggccttgca gcggtagaag aggttgagtc aaggccgggc gcggtggctc 2300
 acgcctgtaa tcccagcact ttgggaggcc gaggcgggtg gatcacgaga 2350
 tcaggagatc gagaccaccc tggctaacac ggtgaaaccc cgtctctact 2400
 aaaaaaatac aaaaagttag cggggcgtgg tgggtgggtgc ctgtagtccc 2450
 agctactcgg gaggctgagg caggagaatg gtgcgaaccc gggaggcgga 2500
 gcttgcaagt agcccagatg gcgccactgc actccagcct gagtgcacaga 2550
 gcgagactct gtctcca 2567

<210> 241

<211> 423

<212> PRT

<213> Homo sapiens

<400> 241

Met	Ala	Gln	Ala	Val	Trp	Ser	Arg	Leu	Gly	Arg	Ile	Leu	Trp	Leu	1	5	10	15
Ala	Cys	Leu	Leu	Pro	Trp	Ala	Pro	Ala	Gly	Val	Ala	Ala	Gly	Leu	20	25	30	
Tyr	Glu	Leu	Asn	Leu	Thr	Thr	Asp	Ser	Pro	Ala	Thr	Thr	Gly	Ala	35	40	45	
Val	Val	Thr	Ile	Ser	Ala	Ser	Leu	Val	Ala	Lys	Asp	Asn	Gly	Ser	50	55	60	
Leu	Ala	Leu	Pro	Ala	Asp	Ala	His	Leu	Tyr	Arg	Phe	His	Trp	Ile	65	70	75	
His	Thr	Pro	Leu	Val	Leu	Thr	Gly	Lys	Met	Glu	Lys	Gly	Leu	Ser	80	85	90	
Ser	Thr	Ile	Arg	Val	Val	Gly	His	Val	Pro	Gly	Glu	Phe	Pro	Val	95	100	105	
Ser	Val	Trp	Val	Thr	Ala	Ala	Asp	Cys	Trp	Met	Cys	Gln	Pro	Val	110	115	120	
Ala	Arg	Gly	Phe	Val	Val	Leu	Pro	Ile	Thr	Glu	Phe	Leu	Val	Gly	125	130	135	
Asp	Leu	Val	Val	Thr	Gln	Asn	Thr	Ser	Leu	Pro	Trp	Pro	Ser	Ser	140	145	150	
Tyr	Leu	Thr	Lys	Thr	Val	Leu	Lys	Val	Ser	Phe	Leu	Leu	His	Asp	155	160	165	
Pro	Ser	Asn	Phe	Leu	Lys	Thr	Ala	Leu	Phe	Leu	Tyr	Ser	Trp	Asp	170	175	180	
Phe	Gly	Asp	Gly	Thr	Gln	Met	Val	Thr	Glu	Asp	Ser	Val	Val	Tyr	185	190	195	

Tyr	Asn	Tyr	Ser	Ile	Ile	Gly	Thr	Phe	Thr	Val	Lys	Leu	Lys	Val	200	205	210
Val	Ala	Glu	Trp	Glu	Glu	Val	Glu	Pro	Asp	Ala	Thr	Arg	Ala	Val	215	220	225
Lys	Gln	Lys	Thr	Gly	Asp	Phe	Ser	Ala	Ser	Leu	Lys	Leu	Gln	Glu	230	235	240
Thr	Leu	Arg	Gly	Ile	Gln	Val	Leu	Gly	Pro	Thr	Leu	Ile	Gln	Thr	245	250	255
Phe	Gln	Lys	Met	Thr	Val	Thr	Leu	Asn	Phe	Leu	Gly	Ser	Pro	Pro	260	265	270
Leu	Thr	Val	Cys	Trp	Arg	Leu	Lys	Pro	Glu	Cys	Leu	Pro	Leu	Glu	275	280	285
Glu	Gly	Glu	Cys	His	Pro	Val	Ser	Val	Ala	Ser	Thr	Ala	Tyr	Asn	290	295	300
Leu	Thr	His	Thr	Phe	Arg	Asp	Pro	Gly	Asp	Tyr	Cys	Phe	Ser	Ile	305	310	315
Arg	Ala	Glu	Asn	Ile	Ile	Ser	Lys	Thr	His	Gln	Tyr	His	Lys	Ile	320	325	330
Gln	Val	Trp	Pro	Ser	Arg	Ile	Gln	Pro	Ala	Val	Phe	Ala	Phe	Pro	335	340	345
Cys	Ala	Thr	Leu	Ile	Thr	Val	Met	Leu	Ala	Phe	Ile	Met	Tyr	Met	350	355	360
Thr	Leu	Arg	Asn	Ala	Thr	Gln	Gln	Lys	Asp	Met	Val	Glu	Asn	Pro	365	370	375
Glu	Pro	Pro	Ser	Gly	Val	Arg	Cys	Cys	Cys	Gln	Met	Cys	Cys	Gly	380	385	390
Pro	Phe	Leu	Leu	Glu	Thr	Pro	Ser	Glu	Tyr	Leu	Glu	Ile	Val	Arg	395	400	405
Glu	Asn	His	Gly	Leu	Leu	Pro	Pro	Leu	Tyr	Lys	Ser	Val	Lys	Thr	410	415	420

Tyr Thr Val

- <210> 242
- <211> 26
- <212> DNA
- <213> Artificial Sequence

- <220>
- <223> Synthetic oligonucleotide probe

- <400> 242
- catttcctta ccctggaccc agctcc 26

- <210> 243
- <211> 25
- <212> DNA
- <213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 243
gaaaggccca cagcacatct ggcag 25

<210> 244
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 244
ccacgacccg agcaacttcc tcaagaccga cttgtttctc tacagc 46

<210> 245
<211> 485
<212> DNA
<213> Homo sapiens

<400> 245
gctcaagacc cagcagtggg acagccagac agacggcacg atggcactga 50
gctcccagat ctgggccgct tgcctcctgc tctcctcct cctcgccagc 100
ctgaccagtg gctctgtttt ccacacaacag acgggacaac ttgcagagct 150
gcaacccccag gacagagctg gagccagggc cagctggatg cccatgttcc 200
agaggcgaag gaggcgagac acccacttcc ccatctgcat tttctgctgc 250
ggctgctgtc atcgatcaaa gtgtgggatg tgctgcaaga cgtagaacct 300
acctgccctg cccccgtccc ctcccttctt tatttattcc tgctgcccc 350
gaacataggt cttggaataa aatggctggt tcttttgttt tccccaaaaa 400
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 450
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 485

<210> 246
<211> 84
<212> PRT
<213> Homo sapiens

<400> 246
Met Ala Leu Ser Ser Gln Ile Trp Ala Ala Cys Leu Leu Leu Leu
1 5 10 15
Leu Leu Leu Ala Ser Leu Thr Ser Gly Ser Val Phe Pro Gln Gln
20 25 30
Thr Gly Gln Leu Ala Glu Leu Gln Pro Gln Asp Arg Ala Gly Ala
35 40 45
Arg Ala Ser Trp Met Pro Met Phe Gln Arg Arg Arg Arg Arg Asp
50 55 60
Thr His Phe Pro Ile Cys Ile Phe Cys Cys Gly Cys Cys His Arg
65 70 75

Ser Lys Cys Gly Met Cys Cys Lys Thr
80

<210> 247
<211> 2359
<212> DNA
<213> Homo sapiens

<400> 247
ctgtcaggaa ggaccatctg aaggctgcaa tttgttctta gggaggcagg 50
tgctggcctg gcctggatct tccaccatgt tctgttgct gccttttgat 100
agcctgattg tcaaccttct gggcatctcc ctgactgtcc tcttcaccct 150
ccttctcggtt ttcacatag tgccagccat ttttgagtc tccttttgta 200
tccgcaaact ctacatgaaa agtctgttaa aaatctttgc gtgggctacc 250
ttgagaatgg agcgaggagc caaggagaag aaccaccagc tttacaagcc 300
ctacaccaac ggaatcattg caaaggatcc cacttcacta gaagaagaga 350
tcaaagagat tcgtcgaagt ggtagtagta aggctctgga caacactcca 400
gagttcgagc tctctgacat tttctacttt tgccggaaag gaatggagac 450
cattatggat gatgaggatg caaagagatt ctgagcagaa gaactggagt 500
cctggaacct gctgagcaga accaattata acttcagta catcagcctt 550
cggtcacgg tcctgtgggg gttaggagtg ctgattcggg actgctttct 600
gctgccgctc aggatagcac tggctttcac agggattagc cttctggtgg 650
tgggcacaac tgtggtggga tacttgccaa atgggaggtt taaggaattc 700
atgagtaaac atgttcactt aatgtgttac cggatctgcg tgcgagcgt 750
gacagccatc atcacctacc atgacagga aaacagacca agaaatggtg 800
gcatctgtgt ggccaatcat acctcaccga tcgatgtgat catcttgcc 850
agcgatggct attatgccat ggtgggtcaa gtgcacgggg gactcatggg 900
tgtgattcag agagccatgg tgaaggcctg cccacacgtc tggtttgagc 950
gtcgggaagt gaaggatcgc cacctggtgg ctaagagact gactgaacat 1000
gtgcaagata aaagcaagct gcctatcctc atcttcccag aaggaacctg 1050
catcaataat acatcgggtg tgatgttcaa aaagggaagt tttgaaattg 1100
gagccacagt ttacctgtt gotatcaagt atgacctca atttgcgat 1150
gccttctgga acagcagcaa atacgggatg gtgacgtacc tgctgcgaat 1200
gatgaccagc tgggccattg tctgcagcgt gtggtacctg cctcccatga 1250
ctagagaggc agatgaagat gctgtccagt ttgcgaatag ggtgaaatct 1300
gccattgcca ggcaggagg acttgtggac ctgctgtggg atgggggcct 1350

gaagagggag aaggtgaagg acacgttcaa ggaggagcag cagaagctgt 1400
 acagcaagat gatcgtgggg aaccacaagg acaggagccg ctccctgagcc 1450
 tgcctccagc tggctggggc caccgtgcgg ggtgccaacg ggctcagagc 1500
 tggagttgcc gccgcgcgcc ccaactgctgt gtcctttcca gactccaggg 1550
 ctccccgggc tgctctggat cccaggactc cggctttcgc cgagccgcag 1600
 cgggatccct gtgcacccgg cgcagcctac ccttggtggt ctaaaccgat 1650
 gctgctgggt gttgcgaccc aggacgagat gccttgtttc ttttacaata 1700
 agtcgttga ggaatgccat taaagtgaac tccccacctt tgcacgctgt 1750
 gcgggctgag tggttgggga gatgtggcca tggctctgtg ctagagatgg 1800
 cgggtacaaga gtctgttatg caagcccgtg tgccagggat gtgctggggg 1850
 cggccacccg ctctccagga aaggcacagc tgaggcactg tggctggcctt 1900
 cggcctcaac atcgccccca gccttggagc tctgcagaca tgataggaag 1950
 gaaaactgtca tctgcagggg ctttcagcaa aatgaagggt tagattttta 2000
 tgctgctgct gatgggggta ctaaaggag gggaagaggc caggtgggcc 2050
 gctgactggg ccatggggag aacgtgtgtt cgtactccag gctaaccctg 2100
 aactcccat gtgatgcgcg ctttgttgaa tgtgtgtctc ggtttcccca 2150
 tctgtaatat gagtcggggg gaatggtggt gattcctacc tcacagggct 2200
 gttgtgggga ttaaagtgt gcgggtgagt gaaggacaca tcacgttcag 2250
 tgtttcaagt acaggccac aaaacggggc acggcaggcc tgagctcaga 2300
 gctgctgcac tgggctttgg atttgttctt gtgagtaaataaaaactggct 2350
 ggtgaatga 2359

<210> 248

<211> 456

<212> PRT

<213> Homo sapiens

<400> 248

Met	Phe	Leu	Leu	Leu	Pro	Phe	Asp	Ser	Leu	Ile	Val	Asn	Leu	Leu
1				5					10					15
Gly	Ile	Ser	Leu	Thr	Val	Leu	Phe	Thr	Leu	Leu	Leu	Val	Phe	Ile
				20					25					30
Ile	Val	Pro	Ala	Ile	Phe	Gly	Val	Ser	Phe	Gly	Ile	Arg	Lys	Leu
				35					40					45
Tyr	Met	Lys	Ser	Leu	Leu	Lys	Ile	Phe	Ala	Trp	Ala	Thr	Leu	Arg
				50					55					60
Met	Glu	Arg	Gly	Ala	Lys	Glu	Lys	Asn	His	Gln	Leu	Tyr	Lys	Pro
				65					70					75

Tyr	Thr	Asn	Gly	Ile	Ile	Ala	Lys	Asp	Pro	Thr	Ser	Leu	Glu	Glu	80	85	90
Glu	Ile	Lys	Glu	Ile	Arg	Arg	Ser	Gly	Ser	Ser	Lys	Ala	Leu	Asp	95	100	105
Asn	Thr	Pro	Glu	Phe	Glu	Leu	Ser	Asp	Ile	Phe	Tyr	Phe	Cys	Arg	110	115	120
Lys	Gly	Met	Glu	Thr	Ile	Met	Asp	Asp	Glu	Val	Thr	Lys	Arg	Phe	125	130	135
Ser	Ala	Glu	Glu	Leu	Glu	Ser	Trp	Asn	Leu	Leu	Ser	Arg	Thr	Asn	140	145	150
Tyr	Asn	Phe	Gln	Tyr	Ile	Ser	Leu	Arg	Leu	Thr	Val	Leu	Trp	Gly	155	160	165
Leu	Gly	Val	Leu	Ile	Arg	Tyr	Cys	Phe	Leu	Leu	Pro	Leu	Arg	Ile	170	175	180
Ala	Leu	Ala	Phe	Thr	Gly	Ile	Ser	Leu	Leu	Val	Val	Gly	Thr	Thr	185	190	195
Val	Val	Gly	Tyr	Leu	Pro	Asn	Gly	Arg	Phe	Lys	Glu	Phe	Met	Ser	200	205	210
Lys	His	Val	His	Leu	Met	Cys	Tyr	Arg	Ile	Cys	Val	Arg	Ala	Leu	215	220	225
Thr	Ala	Ile	Ile	Thr	Tyr	His	Asp	Arg	Glu	Asn	Arg	Pro	Arg	Asn	230	235	240
Gly	Gly	Ile	Cys	Val	Ala	Asn	His	Thr	Ser	Pro	Ile	Asp	Val	Ile	245	250	255
Ile	Leu	Ala	Ser	Asp	Gly	Tyr	Tyr	Ala	Met	Val	Gly	Gln	Val	His	260	265	270
Gly	Gly	Leu	Met	Gly	Val	Ile	Gln	Arg	Ala	Met	Val	Lys	Ala	Cys	275	280	285
Pro	His	Val	Trp	Phe	Glu	Arg	Ser	Glu	Val	Lys	Asp	Arg	His	Leu	290	295	300
Val	Ala	Lys	Arg	Leu	Thr	Glu	His	Val	Gln	Asp	Lys	Ser	Lys	Leu	305	310	315
Pro	Ile	Leu	Ile	Phe	Pro	Glu	Gly	Thr	Cys	Ile	Asn	Asn	Thr	Ser	320	325	330
Val	Met	Met	Phe	Lys	Lys	Gly	Ser	Phe	Glu	Ile	Gly	Ala	Thr	Val	335	340	345
Tyr	Pro	Val	Ala	Ile	Lys	Tyr	Asp	Pro	Gln	Phe	Gly	Asp	Ala	Phe	350	355	360
Trp	Asn	Ser	Ser	Lys	Tyr	Gly	Met	Val	Thr	Tyr	Leu	Leu	Arg	Met	365	370	375
Met	Thr	Ser	Trp	Ala	Ile	Val	Cys	Ser	Val	Trp	Tyr	Leu	Pro	Pro	380	385	390

Met	Thr	Arg	Glu	Ala	Asp	Glu	Asp	Ala	Val	Gln	Phe	Ala	Asn	Arg
				395					400					405
Val	Lys	Ser	Ala	Ile	Ala	Arg	Gln	Gly	Gly	Leu	Val	Asp	Leu	Leu
				410					415					420
Trp	Asp	Gly	Gly	Leu	Lys	Arg	Glu	Lys	Val	Lys	Asp	Thr	Phe	Lys
				425					430					435
Glu	Glu	Gln	Gln	Lys	Leu	Tyr	Ser	Lys	Met	Ile	Val	Gly	Asn	His
				440					445					450
Lys	Asp	Arg	Ser	Arg	Ser									
				455										

<210> 249
 <211> 1103
 <212> DNA
 <213> Homo sapiens

<400> 249
 gcccctcgaa accaggactc cagcacctct ggtcccgccc tcaccggac 50
 ccctggccct cagctctcct ccagggatgg cgctggcggc tttgatgatc 100
 gccctcggca gcctcggcct ccacacctgg caggcccagg ctgttcccac 150
 catcctgccc ctgggcctgg ctccagacac ctttgacgat acctatgtgg 200
 gttgtgcaga ggagatggag gagaaggcag cccccctgct aaaggaggaa 250
 atggcccacc atgccctgct gcgggaatcc tgggaggcag cccaggagac 300
 ctgggaggac aagcgtcgag ggcttacctt gccccctggc ttcaaagccc 350
 agaatggaat agccattatg gtctacacca actcatcgaa caccctgtac 400
 tgggagttga atcaggccgt gcggacgggc ggaggtccc gggagctcta 450
 catgaggcac tttcccttca aggccctgca tttctacctg atccgggccc 500
 tgcagctgct gcgaggcagt gggggctgca gcaggggacc tggggagggtg 550
 gtgttccgag gtgtgggcag ccttcgcttt gaaccaaga ggctggggga 600
 ctctgtccgc ttgggccagt ttgcctccag ctccctggat aaggcagtgg 650
 cccacagatt tggggagaag aggcggggct gtgtgtctgc gccaggggtg 700
 cagctagggt cacaatctga gggggcctcc tctctgcccc cctggaagac 750
 tctgtctttg gccctggag agttccagct ctccaggggtt gggccctgaa 800
 agtccaacat ctgccactta ggagccctgg gaacgggtga ccttcatatg 850
 acgaagaggc acctccagca gccttgagaa gcaagaacat ggttccggac 900
 ccagccctag cagccttctc cccaaccagg atgttggcct ggggaggcca 950
 cagcagggtc gagggaaactc tgctatgtga tggggacttc ctgggacaag 1000
 caaggaaagt actgaggcag ccacttgatt gaacggtgtt gcaatgtgga 1050

gacatggagt tttattgagg tagctacgtg attaaatggt attgcagtgt 1100

gga 1103

<210> 250

<211> 240

<212> PRT

<213> Homo sapiens

<400> 250

Met Ala Leu Ala Ala Leu Met Ile Ala Leu Gly Ser Leu Gly Leu
1 5 10 15

His Thr Trp Gln Ala Gln Ala Val Pro Thr Ile Leu Pro Leu Gly
20 25 30

Leu Ala Pro Asp Thr Phe Asp Asp Thr Tyr Val Gly Cys Ala Glu
35 40 45

Glu Met Glu Glu Lys Ala Ala Pro Leu Leu Lys Glu Glu Met Ala
50 55 60

His His Ala Leu Leu Arg Glu Ser Trp Glu Ala Ala Gln Glu Thr
65 70 75

Trp Glu Asp Lys Arg Arg Gly Leu Thr Leu Pro Pro Gly Phe Lys
80 85 90

Ala Gln Asn Gly Ile Ala Ile Met Val Tyr Thr Asn Ser Ser Asn
95 100 105

Thr Leu Tyr Trp Glu Leu Asn Gln Ala Val Arg Thr Gly Gly Gly
110 115 120

Ser Arg Glu Leu Tyr Met Arg His Phe Pro Phe Lys Ala Leu His
125 130 135

Phe Tyr Leu Ile Arg Ala Leu Gln Leu Leu Arg Gly Ser Gly Gly
140 145 150

Cys Ser Arg Gly Pro Gly Glu Val Val Phe Arg Gly Val Gly Ser
155 160 165

Leu Arg Phe Glu Pro Lys Arg Leu Gly Asp Ser Val Arg Leu Gly
170 175 180

Gln Phe Ala Ser Ser Ser Leu Asp Lys Ala Val Ala His Arg Phe
185 190 195

Gly Glu Lys Arg Arg Gly Cys Val Ser Ala Pro Gly Val Gln Leu
200 205 210

Gly Ser Gln Ser Glu Gly Ala Ser Ser Leu Pro Pro Trp Lys Thr
215 220 225

Leu Leu Leu Ala Pro Gly Glu Phe Gln Leu Ser Gly Val Gly Pro
230 235 240

<210> 251

<211> 50

<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 251
ccaccacctg gaggtcctgc agttgggcag gaactccatc cggcagattg 50

<210> 252
<211> 1076
<212> DNA
<213> Homo sapiens

<400> 252
gtggcttcat ttcagtggct gacttccaga gagcaatatg gctggttccc 50
caacatgcct caccctcatc tatatccttt ggcagctcac agggtcagca 100
gcctctggac ccgtgaaaga gctggtcggt tccgttggtg gggccgtgac 150
tttccccctg aagtccaaag taaagcaagt tgactctatt gtctggacct 200
tcaacacaac ccctcttgtc accatacagc cagaaggggg cactatcata 250
gtgacccaaa atcgtaatat ggagagagta gacttcccag atggaggcta 300
ctccctgaag ctacagcaaac tgaagaagaa tgactcaggg atctactatg 350
tggggatata cagctcatca ctccagcagc cctccacca ggagtacgtg 400
ctgcatgtct acgagcacct gtcaaagcct aaagtcacca tgggtctgca 450
gagcaataag aatggcacct gtgtgaccaa tctgacatgc tgcattggaac 500
atggggaaga ggatgtgatt tatacctgga aggccctggg gcaagcagcc 550
aatgagtcct ataatgggtc catcctcccc atctcctgga gatggggaga 600
aagtgatatg accttcatct gcgttgccag gaaccctgtc agcagaaact 650
tctcaagccc catccttgcc aggaagctct gtgaagggtc tgctgatgac 700
ccagattcct ccattggtcct cctgtgtctc ctgttggtgc cctcctgct 750
cagtctcttt gtactggggc tatttctttg gtttctgaag agagagagac 800
aagaagagta cattgaagag aagaagagag tggacatttg tcgggaaact 850
cctaacatat gccccattc tggagagaac acagagtacg acacaatccc 900
tcacactaat agaacaatcc taaaggaaga tccagcaaat acggtttact 950
ccactgtgga aataccgaaa aagatggaaa atccccactc actgctcagc 1000
atgccagaca caccaaggct atttgcctat gagaatgtta tctagacagc 1050
agtgcactcc cctaagtctc tgctca 1076

<210> 253
<211> 335
<212> PRT
<213> Homo sapiens

<400> 253
Met Ala Gly Ser Pro Thr Cys Leu Thr Leu Ile Tyr Ile Leu Trp

1	5	10	15
Gln Leu Thr Gly	Ser Ala Ala Ser Gly	Pro Val Lys Glu Leu Val	
	20	25	30
Gly Ser Val Gly	Gly Ala Val Thr Phe	Pro Leu Lys Ser Lys Val	
	35	40	45
Lys Gln Val Asp	Ser Ile Val Trp Thr	Phe Asn Thr Thr Pro Leu	
	50	55	60
Val Thr Ile Gln	Pro Glu Gly Gly Thr	Ile Ile Val Thr Gln Asn	
	65	70	75
Arg Asn Arg Glu	Arg Val Asp Phe Pro	Asp Gly Gly Tyr Ser Leu	
	80	85	90
Lys Leu Ser Lys	Leu Lys Lys Asn Asp	Ser Gly Ile Tyr Tyr Val	
	95	100	105
Gly Ile Tyr Ser	Ser Ser Leu Gln Gln	Pro Ser Thr Gln Glu Tyr	
	110	115	120
Val Leu His Val	Tyr Glu His Leu Ser	Lys Pro Lys Val Thr Met	
	125	130	135
Gly Leu Gln Ser	Asn Lys Asn Gly Thr	Cys Val Thr Asn Leu Thr	
	140	145	150
Cys Cys Met Glu	His Gly Glu Glu Asp	Val Ile Tyr Thr Trp Lys	
	155	160	165
Ala Leu Gly Gln	Ala Ala Asn Glu Ser	His Asn Gly Ser Ile Leu	
	170	175	180
Pro Ile Ser Trp	Arg Trp Gly Glu Ser	Asp Met Thr Phe Ile Cys	
	185	190	195
Val Ala Arg Asn	Pro Val Ser Arg Asn	Phe Ser Ser Pro Ile Leu	
	200	205	210
Ala Arg Lys Leu	Cys Glu Gly Ala Ala	Asp Asp Pro Asp Ser Ser	
	215	220	225
Met Val Leu Leu	Cys Leu Leu Leu Val	Pro Leu Leu Leu Ser Leu	
	230	235	240
Phe Val Leu Gly	Leu Phe Leu Trp Phe	Leu Lys Arg Glu Arg Gln	
	245	250	255
Glu Glu Tyr Ile	Glu Glu Lys Lys Arg	Val Asp Ile Cys Arg Glu	
	260	265	270
Thr Pro Asn Ile	Cys Pro His Ser Gly	Glu Asn Thr Glu Tyr Asp	
	275	280	285
Thr Ile Pro His	Thr Asn Arg Thr Ile	Leu Lys Glu Asp Pro Ala	
	290	295	300
Asn Thr Val Tyr	Ser Thr Val Glu Ile	Pro Lys Lys Met Glu Asn	
	305	310	315
Pro His Ser Leu	Leu Thr Met Pro Asp	Thr Pro Arg Leu Phe Ala	

320

325

330

Tyr Glu Asn Val Ile
335

<210> 254
<211> 1053
<212> DNA
<213> Homo sapiens

<400> 254
ctgggtcccc aacatgcctc accctcatct atatcctttg gcagctcaca 50
gggtcagcag cctctggacc cgtgaaagag ctggtcgggt ccgttggtgg 100
ggccgtgact ttccccctga agtccaaagt aaagcaagtt gactctattg 150
tctggacctt caacacaacc cctcttgtca ccatacagcc agaagggggc 200
actatcatag tgacccaaaa tcgtaatagg gagagagtag acttcccaga 250
tggaggctac tccctgaagc tcagcaaact gaagaagaat gactcaggga 300
tctactatgt ggggatatac agctcatcac tccagcagcc ctccaccag 350
gagtacgtgc tgcattgtcta cgagcacctg tcaaagccta aagtcaccat 400
gggtctgcag agcaataaga atggcacctg tgtgaccaat ctgacatgct 450
gcatggaaca tggggaagag gatgtgattt atacctggaa ggccctgggg 500
caagcagcca atgagtccca taatgggtcc atcctcccca tctcctggag 550
atggggagaa agtgatatga ccttcatctg cgttgccagg aaccctgtca 600
gcagaaactt ctcaagcccc atccttgcca ggaagctctg tgaagggtgct 650
gctgatgacc cagattcctc catggtcctc ctgtgtctcc tgttggtgcc 700
cctcctgctc agtctctttg tactggggct atttctttgg tttctgaaga 750
gagagagaca agaagagtac attgaagaga agaagagagt ggacatttgt 800
cgggaaactc ctaacatatg ccccatctct ggagagaaca cagagtacga 850
cacaatccct cacactaata gaacaatcct aaaggaagat ccagcaaata 900
cggtttactc cactgtggaa ataccgaaaa agatggaaaa tccccactca 950
ctgctcacga tgccagacac accaaggcta tttgcctatg agaatgttat 1000
ctagacagca gtgcactccc ctaagtctct gctcaaaaaa aaaaaaaaaa 1050
aaa 1053

<210> 255
<211> 860
<212> DNA
<213> Homo sapiens

<400> 255
gaaagacgtg gtctgacag acagacaato ctattcccta ccaaaatgaa 50

gatgctgctg ctgctgtggt tgggactgac cctagtctgt gtccatgcag 100
aagaagctag ttctacggga aggaacttta atgtagaaaa gattaatggg 150
gaatggcata ctattatcct ggcctctgac aaaagagaaa agatagaaga 200
acatggcaac tttagacttt ttctggagca aatccatgtc ttggagaatt 250
ccttagttct taaagtccat actgtaagag atgaagagtg ctccgaatta 300
tctatggttg ctgacaaaac agaaaaggct ggtgaatatt ctgtgacgta 350
tgatggattc aatacattta ctatacctaa gacagactat gataactttc 400
ttatggctca cctcattaac gaaaaggatg gggaaacctt ccagctgatg 450
gggctctatg gccgagaacc agatttgagt tcagacatca aggaaagggt 500
tgcacaacta tgtgaggagc atggaatcct tagagaaaat atcattgacc 550
tatccaatgc caatcgtgct ctccaggccc gagaatgaag aatggcctga 600
gcctccagtg ttgagtggac acttctcacc aggactccac catcatccct 650
tcctatccat acagcatccc cagtataaat tctgtgatct gcattccatc 700
ctgtctcact gagaagtcca attccagtct atcaacatgt tacctaggat 750
acctcatcaa gaatcaaaga cttctttaaa tttctctttg atacaccctt 800
gacaattttt catgaaatta ttcctcttcc tgttcaataa atgattaccc 850
ttgcacttaa 860

<210> 256
<211> 180
<212> PRT
<213> Homo sapiens

<400> 256
Met Lys Met Leu Leu Leu Leu Cys Leu Gly Leu Thr Leu Val Cys
1 5 10 15
Val His Ala Glu Glu Ala Ser Ser Thr Gly Arg Asn Phe Asn Val
20 25 30
Glu Lys Ile Asn Gly Glu Trp His Thr Ile Ile Leu Ala Ser Asp
35 40 45
Lys Arg Glu Lys Ile Glu Glu His Gly Asn Phe Arg Leu Phe Leu
50 55 60
Glu Gln Ile His Val Leu Glu Asn Ser Leu Val Leu Lys Val His
65 70 75
Thr Val Arg Asp Glu Glu Cys Ser Glu Leu Ser Met Val Ala Asp
80 85 90
Lys Thr Glu Lys Ala Gly Glu Tyr Ser Val Thr Tyr Asp Gly Phe
95 100 105
Asn Thr Phe Thr Ile Pro Lys Thr Asp Tyr Asp Asn Phe Leu Met
110 115 120

Ala	His	Leu	Ile	Asn	Glu	Lys	Asp	Gly	Glu	Thr	Phe	Gln	Leu	Met
				125					130					135
Gly	Leu	Tyr	Gly	Arg	Glu	Pro	Asp	Leu	Ser	Ser	Asp	Ile	Lys	Glu
				140					145					150
Arg	Phe	Ala	Gln	Leu	Cys	Glu	Glu	His	Gly	Ile	Leu	Arg	Glu	Asn
				155					160					165
Ile	Ile	Asp	Leu	Ser	Asn	Ala	Asn	Arg	Cys	Leu	Gln	Ala	Arg	Glu
				170					175					180

<210> 257
 <211> 766
 <212> DNA
 <213> Homo sapiens

<400> 257
 ggctcgagcg tttctgagcc aggggtgacc atgacctgct gcgaaggatg 50
 gacatcctgc aatggattca gcctgctggt tctactgctg ttaggagtag 100
 ttctcaatgc gatacctcta attgtcagct tagttgagga agaccaatth 150
 tctcaaaacc ccattctcttg ctttgagtgg tggttcccag gaattatagg 200
 agcaggtctg atggccattc cagcaacaac aatgtccttg acagcaagaa 250
 aaagagcgtg ctgcaacaac agaactggaa tgtttctttc atcatttttc 300
 agtgtgatca cagtcattgg tgctctgtat tgcattgctga tatccatcca 350
 ggctctctta aaaggtcctc tcatgtgtaa ttctccaagc aacagtaatg 400
 ccaattgtga attttcattg aaaaacatca gtgacattca tccagaatcc 450
 ttcaacttgc agtgggtttt caatgactct tgtgcaacct ctactgggtt 500
 caataaacc accagtaacg acaccatggc gagggtgctg agagcatcta 550
 gtttccactt cgattctgaa gaaaacaaac ataggcttat ccacttctca 600
 gtatttttag gtctattgct tgggtgaatt ctggagggtc tgtttgggct 650
 cagtcagata gtcattgggt tccttggtg tctgtgtgga gtctctaagc 700
 gaagaagtca aattgtgtag tttaatggga ataaaatgta agtatcagta 750
 gtttgaaaaa aaaaaa 766

<210> 258
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 258
 Met Thr Cys Cys Glu Gly Trp Thr Ser Cys Asn Gly Phe Ser Leu
 1 5 10 15
 Leu Val Leu Leu Leu Gly Val Val Leu Asn Ala Ile Pro Leu
 20 25 30
 Ile Val Ser Leu Val Glu Glu Asp Gln Phe Ser Gln Asn Pro Ile

	35	40	45
Ser Cys Phe Glu Trp Trp Phe Pro Gly Ile Ile Gly Ala Gly Leu	50	55	60
Met Ala Ile Pro Ala Thr Thr Met Ser Leu Thr Ala Arg Lys Arg	65	70	75
Ala Cys Cys Asn Asn Arg Thr Gly Met Phe Leu Ser Ser Phe Phe	80	85	90
Ser Val Ile Thr Val Ile Gly Ala Leu Tyr Cys Met Leu Ile Ser	95	100	105
Ile Gln Ala Leu Leu Lys Gly Pro Leu Met Cys Asn Ser Pro Ser	110	115	120
Asn Ser Asn Ala Asn Cys Glu Phe Ser Leu Lys Asn Ile Ser Asp	125	130	135
Ile His Pro Glu Ser Phe Asn Leu Gln Trp Phe Phe Asn Asp Ser	140	145	150
Cys Ala Pro Pro Thr Gly Phe Asn Lys Pro Thr Ser Asn Asp Thr	155	160	165
Met Ala Ser Gly Trp Arg Ala Ser Ser Phe His Phe Asp Ser Glu	170	175	180
Glu Asn Lys His Arg Leu Ile His Phe Ser Val Phe Leu Gly Leu	185	190	195
Leu Leu Val Gly Ile Leu Glu Val Leu Phe Gly Leu Ser Gln Ile	200	205	210
Val Ile Gly Phe Leu Gly Cys Leu Cys Gly Val Ser Lys Arg Arg	215	220	225
Ser Gln Ile Val			

<210> 259
 <211> 434
 <212> DNA
 <213> Homo sapiens

<400> 259
 gtogaatcca aatcactcat tgtgaaagct gagctcacag ccgaataagc 50
 caccatgagg ctgtcagtgt gtctcctgat ggtctcgctg gccctttgct 100
 gctaccaggc ccagtctctt gtctgccag ctgttgcttc tgagatcaca 150
 gtctttttat tcttaagtga cgctgoggta aacctccaag ttgccaaaact 200
 taatccacct ccagaagctc ttgcagccaa gttggaagtg aagcactgca 250
 ccgatcagat atcttttaag aaacgactct cattgaaaaa gtcttggtgg 300
 aaatagtga aaaatgtggt gtgtgacatg taaaaatgct caacctggtt 350
 tccaaagtct ttcaacgaca ccctgatctt cactaaaaat tgtaaagggt 400

tcaacacgtt gctttaataa atcacttgcc ctgc 434

<210> 260

<211> 83

<212> PRT

<213> Homo sapiens

<400> 260

Met	Arg	Leu	Ser	Val	Cys	Leu	Leu	Met	Val	Ser	Leu	Ala	Leu	Cys
1				5					10					15
Cys	Tyr	Gln	Ala	His	Ala	Leu	Val	Cys	Pro	Ala	Val	Ala	Ser	Glu
				20				25						30
Ile	Thr	Val	Phe	Leu	Phe	Leu	Ser	Asp	Ala	Ala	Val	Asn	Leu	Gln
				35				40						45
Val	Ala	Lys	Leu	Asn	Pro	Pro	Pro	Glu	Ala	Leu	Ala	Ala	Lys	Leu
				50				55						60
Glu	Val	Lys	His	Cys	Thr	Asp	Gln	Ile	Ser	Phe	Lys	Lys	Arg	Leu
				65				70						75
Ser	Leu	Lys	Lys	Ser	Trp	Trp	Lys							
				80										

<210> 261

<211> 636

<212> DNA

<213> Homo sapiens

<400> 261

atccgttctc tgcgctgcc a gctcaggtga gccctcgcca aggtgacctc 50
gcaggacact ggtgaaggag cagtgaggaa cctgcagagt cacacagttg 100
ctgaccaatt gagctgtgag cctggagcag atccgtgggc tgcagacccc 150
cgccccagtg cctctcccc tgcagccctg cccctogaac tgtgacatgg 200
agagagtgac cctggccctt ctctactgg caggcctgac tgccttgga 250
gccaatgacc catttgccaa taaagacgat cccttctact atgactggaa 300
aaacctgcag ctgagcggac tgatctgcgg agggctcctg gccattgctg 350
ggatcgcggc agttctgagt ggcaaatgca aatacaagag cagccagaag 400
cagcacagtc ctgtacctga gaaggccatc ccaactcatca ctccaggctc 450
tgccactact tgctgagcac aggactggcc tccagggatg gcctgaagcc 500
taacactggc cccagcacc tcctcccctg ggaggcctta tcctcaagga 550
aggacttctc tccaagggca ggctgttagg cccctttctg atcaggaggc 600
ttctttatga attaaactcg cccaccacc ccctca 636

<210> 262

<211> 89

<212> PRT

<213> Homo sapiens

<400> 262

Met Glu Arg Val Thr Leu Ala Leu Leu Leu Leu Ala Gly Leu Thr
1 5 10 15

Ala Leu Glu Ala Asn Asp Pro Phe Ala Asn Lys Asp Asp Pro Phe
20 25 30

Tyr Tyr Asp Trp Lys Asn Leu Gln Leu Ser Gly Leu Ile Cys Gly
35 40 45

Gly Leu Leu Ala Ile Ala Gly Ile Ala Ala Val Leu Ser Gly Lys
50 55 60

Cys Lys Tyr Lys Ser Ser Gln Lys Gln His Ser Pro Val Pro Glu
65 70 75

Lys Ala Ile Pro Leu Ile Thr Pro Gly Ser Ala Thr Thr Cys
80 85

<210> 263

<211> 1676

<212> DNA

<213> Homo sapiens

<400> 263

ggagaagagg ttgtgtggga caagctgctc ccgacagaag gatgtcgctg 50

ctgagcctgc cctggctggg cctcagaccg gtggcaatgt ccccatggct 100

actcctgctg ctggttgtgg gctcctggct actcgccgc atcctggctt 150

ggacctatgc cttctataac aactgccgcc ggctccagtg tttccacag 200

cccccaaac ggaactggtt ttgggggtcac ctgggcctga tcaactctac 250

agaggagggc ttgaaggact cgaccagat gtcggccacc tattccagg 300

gctttacggt atggctgggt cccatcatcc ccttcacgt tttatgccac 350

cctgacacca tccggtctat caccaatgcc tcagctgcca ttgcacccaa 400

ggataatctc ttcacaggt tcctgaagcc ctggctggga gaagggatac 450

tgctgagtgg cggtgacaag tggagccgcc accgtcggat gctgacgccc 500

gccttccatt tcaacatcct gaagtcctat ataacgatct tcaacaagag 550

tgcaaacatc atgcttgaca agtggcagca cctggcctca gagggcagca 600

gtcgtctgga catgtttgag cacatcagcc tcatgacott ggacagtcta 650

cagaaatgca tcttcagctt tgacagccat tgtcaggaga ggcccagtga 700

atatattgcc accatcttgg agctcagtg ccttgtagag aaaagaagcc 750

agcatatcct ccagcacatg gactttctgt attacctctc ccatgacggg 800

cggcgcttcc acagggcctg ccgcctgggtg catgacttca cagacgctgt 850

catccgggag cggcgtcgca cctcccccac tcagggtatt gatgattttt 900

tcaaagacaa agccaagtcc aagactttgg atttcattga tgtgcttctg 950

ctgagcaagg atgaagatgg gaaggcattg tcagatgagg atataagagc 1000
 agaggctgac accttcatgt ttggaggcca tgacaccacg gccagtggcc 1050
 tctcctgggt cctgtacaac cttgcgaggc acccagaata ccaggagcgc 1100
 tgccgacagg aggtgcaaga gcttctgaag gaccgcatc ctaaagagat 1150
 tgaatgggac gacctggccc agctgccctt cctgaccatg tgcgtgaagg 1200
 agagcctgag gttacatccc ccagctccct tcctctcccg atgctgcacc 1250
 caggacattg ttctcccaga tggccgagtc atccccaaag gcattacctg 1300
 cctcatcgat attatagggg tccatcacia cccaactgtg tggccggatc 1350
 ctgaggtcta cgacccttc cgctttgacc cagagaacag caaggggagg 1400
 tcacctctgg cttttattcc tttctccgca gggcccagga actgcatcgg 1450
 gcaggcggtc gccatggcgg agatgaaagt ggtcctggcg ttgatgctgc 1500
 tgcacttccg gttcctgcc aaccacactg agccccgcag gaagctggaa 1550
 ttgatcatgc gcgccgaggg cgggctttgg ctgcgggtgg agccccctgaa 1600
 tgtaggcttg cagtgacttt ctgaccatc cacctgtttt tttgcagatt 1650
 gtcataaata aaacggtgct gtcaaa 1676

<210> 264
 <211> 524
 <212> PRT
 <213> Homo sapiens

<400> 264
 Met Ser Leu Leu Ser Leu Pro Trp Leu Gly Leu Arg Pro Val Ala
 1 5 10 15
 Met Ser Pro Trp Leu Leu Leu Leu Val Val Gly Ser Trp Leu
 20 25 30
 Leu Ala Arg Ile Leu Ala Trp Thr Tyr Ala Phe Tyr Asn Asn Cys
 35 40 45
 Arg Arg Leu Gln Cys Phe Pro Gln Pro Pro Lys Arg Asn Trp Phe
 50 55 60
 Trp Gly His Leu Gly Leu Ile Thr Pro Thr Glu Glu Gly Leu Lys
 65 70 75
 Asp Ser Thr Gln Met Ser Ala Thr Tyr Ser Gln Gly Phe Thr Val
 80 85 90
 Trp Leu Gly Pro Ile Ile Pro Phe Ile Val Leu Cys His Pro Asp
 95 100 105
 Thr Ile Arg Ser Ile Thr Asn Ala Ser Ala Ala Ile Ala Pro Lys
 110 115 120
 Asp Asn Leu Phe Ile Arg Phe Leu Lys Pro Trp Leu Gly Glu Gly
 125 130 135

Ile	Leu	Leu	Ser	Gly	Gly	Asp	Lys	Trp	Ser	Arg	His	Arg	Arg	Met	140	145	150
Leu	Thr	Pro	Ala	Phe	His	Phe	Asn	Ile	Leu	Lys	Ser	Tyr	Ile	Thr	155	160	165
Ile	Phe	Asn	Lys	Ser	Ala	Asn	Ile	Met	Leu	Asp	Lys	Trp	Gln	His	170	175	180
Leu	Ala	Ser	Glu	Gly	Ser	Ser	Arg	Leu	Asp	Met	Phe	Glu	His	Ile	185	190	195
Ser	Leu	Met	Thr	Leu	Asp	Ser	Leu	Gln	Lys	Cys	Ile	Phe	Ser	Phe	200	205	210
Asp	Ser	His	Cys	Gln	Glu	Arg	Pro	Ser	Glu	Tyr	Ile	Ala	Thr	Ile	215	220	225
Leu	Glu	Leu	Ser	Ala	Leu	Val	Glu	Lys	Arg	Ser	Gln	His	Ile	Leu	230	235	240
Gln	His	Met	Asp	Phe	Leu	Tyr	Tyr	Leu	Ser	His	Asp	Gly	Arg	Arg	245	250	255
Phe	His	Arg	Ala	Cys	Arg	Leu	Val	His	Asp	Phe	Thr	Asp	Ala	Val	260	265	270
Ile	Arg	Glu	Arg	Arg	Arg	Thr	Leu	Pro	Thr	Gln	Gly	Ile	Asp	Asp	275	280	285
Phe	Phe	Lys	Asp	Lys	Ala	Lys	Ser	Lys	Thr	Leu	Asp	Phe	Ile	Asp	290	295	300
Val	Leu	Leu	Leu	Ser	Lys	Asp	Glu	Asp	Gly	Lys	Ala	Leu	Ser	Asp	305	310	315
Glu	Asp	Ile	Arg	Ala	Glu	Ala	Asp	Thr	Phe	Met	Phe	Gly	Gly	His	320	325	330
Asp	Thr	Thr	Ala	Ser	Gly	Leu	Ser	Trp	Val	Leu	Tyr	Asn	Leu	Ala	335	340	345
Arg	His	Pro	Glu	Tyr	Gln	Glu	Arg	Cys	Arg	Gln	Glu	Val	Gln	Glu	350	355	360
Leu	Leu	Lys	Asp	Arg	Asp	Pro	Lys	Glu	Ile	Glu	Trp	Asp	Asp	Leu	365	370	375
Ala	Gln	Leu	Pro	Phe	Leu	Thr	Met	Cys	Val	Lys	Glu	Ser	Leu	Arg	380	385	390
Leu	His	Pro	Pro	Ala	Pro	Phe	Ile	Ser	Arg	Cys	Cys	Thr	Gln	Asp	395	400	405
Ile	Val	Leu	Pro	Asp	Gly	Arg	Val	Ile	Pro	Lys	Gly	Ile	Thr	Cys	410	415	420
Leu	Ile	Asp	Ile	Ile	Gly	Val	His	His	Asn	Pro	Thr	Val	Trp	Pro	425	430	435
Asp	Pro	Glu	Val	Tyr	Asp	Pro	Phe	Arg	Phe	Asp	Pro	Glu	Asn	Ser	440	445	450

Lys	Gly	Arg	Ser	Pro	Leu	Ala	Phe	Ile	Pro	Phe	Ser	Ala	Gly	Pro
				455					460					465
Arg	Asn	Cys	Ile	Gly	Gln	Ala	Phe	Ala	Met	Ala	Glu	Met	Lys	Val
				470					475					480
Val	Leu	Ala	Leu	Met	Leu	Leu	His	Phe	Arg	Phe	Leu	Pro	Asp	His
				485					490					495
Thr	Glu	Pro	Arg	Arg	Lys	Leu	Glu	Leu	Ile	Met	Arg	Ala	Glu	Gly
				500					505					510
Gly	Leu	Trp	Leu	Arg	Val	Glu	Pro	Leu	Asn	Val	Gly	Leu	Gln	
				515					520					

<210> 265
 <211> 584
 <212> DNA
 <213> Homo sapiens

<400> 265
 caacagaagc caagaaggaa gccgtctatc ttgtggcgat catgtataag 50
 ctggcctcct gctgtttgct tttcacagga ttcttaaadc ctctcttctc 100
 tcttcctctc cttgactcca gggaaatadc ctttcaactc tcagcacctc 150
 atgaagacgc gcgcttaact ccggaggagc tagaaagagc ttcccttcta 200
 cagatattgc cagagatgct ggggtgcagaa agaggggata ttctcaggaa 250
 agcagactca agtaccaaca tttttaaccc aagaggaaat ttgagaaagt 300
 ttcaggattt ctctggacaa gatcctaaca ttttactgag tcatcttttg 350
 gccagaatct ggaaaccata caagaaacgt gagactcctg attgcttctg 400
 gaaatactgt gtctgaagtg aaataagcat ctgttagtca gctcagaaac 450
 acccatctta gaatatgaaa aataacacaa tgcttgattt gaaaacagtg 500
 tggagaaaaa ctaggcaaac tacaccctgt tcattgttac ctggaaaata 550
 aatcctctat gttttgcaca aaaaaaaaaa aaaa 584

<210> 266
 <211> 124
 <212> PRT
 <213> Homo sapiens

<400> 266
 Met Tyr Lys Leu Ala Ser Cys Cys Leu Leu Phe Thr Gly Phe Leu
 1 5 10 15
 Asn Pro Leu Leu Ser Leu Pro Leu Leu Asp Ser Arg Glu Ile Ser
 20 25 30
 Phe Gln Leu Ser Ala Pro His Glu Asp Ala Arg Leu Thr Pro Glu
 35 40 45
 Glu Leu Glu Arg Ala Ser Leu Leu Gln Ile Leu Pro Glu Met Leu
 50 55 60

Gly	Ala	Glu	Arg	Gly	Asp	Ile	Leu	Arg	Lys	Ala	Asp	Ser	Ser	Thr
				65					70					75
Asn	Ile	Phe	Asn	Pro	Arg	Gly	Asn	Leu	Arg	Lys	Phe	Gln	Asp	Phe
				80					85					90
Ser	Gly	Gln	Asp	Pro	Asn	Ile	Leu	Leu	Ser	His	Leu	Leu	Ala	Arg
				95					100					105
Ile	Trp	Lys	Pro	Tyr	Lys	Lys	Arg	Glu	Thr	Pro	Asp	Cys	Phe	Trp
				110					115					120

Lys Tyr Cys Val

<210> 267
 <211> 654
 <212> DNA
 <213> Homo sapiens

<400> 267
 gaacattttt agttcccaag gaatgtacat cagccccacg gaagctaggc 50
 cacctctggg atgggggttg tggtttaaaa caaacgccag tcatoctata 100
 taaggacctg acagccacca ggcaccacct ccgccaggaa ctgcaggccc 150
 acctgtctgc aaccagctg aggccatgcc ctccccaggg accgtctgca 200
 gcctcctgct cctcggcatg ctctggctgg acttggccat ggcaggctcc 250
 agcttcctga gccctgaaca ccagagagtc cagcagagaa aggagtcgaa 300
 gaagccacca gccaaagtgc agccccgagc totagcaggc tggctccgcc 350
 cggaagatgg aggtcaagca gaaggggcag aggatgaact ggaagtccgg 400
 ttcaacgccc ctttgatgt tggaatcaag ctgtcagggg ttcagtacca 450
 gcagcacagc caggccctgg ggaagtttct tcaggacatc ctctgggaag 500
 aggccaaaga ggccccagcc gacaagtgat cgcacacaag ccttactcac 550
 ctctctctaa gtttagaagc gctcatctgg cttttcgott gcttctgcag 600
 caactccac gactgttgta caagctcagg aggcgaataa atgttcaaac 650
 tgta 654

<210> 268
 <211> 117
 <212> PRT
 <213> Homo sapiens

<400> 268
 Met Pro Ser Pro Gly Thr Val Cys Ser Leu Leu Leu Gly Met
 1 5 10 15
 Leu Trp Leu Asp Leu Ala Met Ala Gly Ser Ser Phe Leu Ser Pro
 20 25 30
 Glu His Gln Arg Val Gln Gln Arg Lys Glu Ser Lys Lys Pro Pro
 35 40 45

Ala	Lys	Leu	Gln	Pro	Arg	Ala	Leu	Ala	Gly	Trp	Leu	Arg	Pro	Glu
				50					55					60
Asp	Gly	Gly	Gln	Ala	Glu	Gly	Ala	Glu	Asp	Glu	Leu	Glu	Val	Arg
				65					70					75
Phe	Asn	Ala	Pro	Phe	Asp	Val	Gly	Ile	Lys	Leu	Ser	Gly	Val	Gln
				80					85					90
Tyr	Gln	Gln	His	Ser	Gln	Ala	Leu	Gly	Lys	Phe	Leu	Gln	Asp	Ile
				95					100					105
Leu	Trp	Glu	Glu	Ala	Lys	Glu	Ala	Pro	Ala	Asp	Lys			
				110					115					

<210> 269
 <211> 1332
 <212> DNA
 <213> Homo sapiens

<400> 269
 cggccacagc tggcatgctc tgcctgatcg ccacccctgct gtatgtcctc 50
 gtccagtacc tcgtgaaccc cggggtgctc cgcacggacc ccagatgtca 100
 agaatatgaa cacgtggctg ctgttcctcc ccctgttccc ggtgcaggtg 150
 cagaccctga tagtcgtgat catcgggatg ctctgtctcc tgctggactt 200
 tcttggcttg gtgcacctgg gccagctgct catcttccac atctacctga 250
 gtatgtcccc caccctaagc ccccgatccc cccaaggctg ggtggtcaga 300
 gctgctcatc ttacacctct acttgagtat gtccctaacc ctgagcccc 350
 cacgcctggg gccagagtct ttgtcccccg tgtgcgcatg tgttcagggt 400
 cagcctctcc cagaagttag atcatggaca aaaagggcaa atcacaggaa 450
 gaaattaaat ccatgaggac ccagcaggcc cagcaagaag ctgaactcac 500
 gccgagacct gcaggagtgg tgccaggctg ttgaagtaac aagtttaaaa 550
 tgttcagaga caatggaatg gaatctatta ggcaagaaca ggacattatg 600
 aaataaggac aggtggactt ccaaaaacac aagtagaat tctaacaatg 650
 aaatatatta caggcaggtc acccaactaac caaacaactg aagcgagagc 700
 tgtggctctg cttggtctca cagtgggcac agcggtaggc ggtcagtcac 750
 gttgctgaac gacggagggt aaactcccc gcccgaagaa aacctgtgtt 800
 ggaagtaaca acaacctccc tgctcctggc accagccgtt ttggtcatgg 850
 tgggccagct gcaaagcgtc ttccattctc tgggcagtgg tggccccgag 900
 gctgtggcct ctgagggggt ttctgtggac acgggcagca gagtgtgtcc 950
 aggccagccc ccaagaatgc cctgctcctg acagcttggc caaccctgg 1000
 tcagggcaga gggagttggg tgggtcaggc tctgggctca cctccatctc 1050

cagagcatcc cctgcctgca gttgtggcaa gaacgccag ctcagaatga 1100
 acacacccca ccaagagcct ccttggtcat aaccacaggt taccctacaa 1150
 accactgtcc ccacacaacc ctggggatgt tttaaaacac acacctctaa 1200
 cgcataatctt acagtcactg ttgtcttgcc tgagggttga atttttttta 1250
 atgaaagtgc aatgaaaatc actggattaa atcctacgga cacagagctg 1300
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa 1332

<210> 270
 <211> 142
 <212> PRT
 <213> Homo sapiens

<400> 270
 Met Asn Thr Trp Leu Leu Phe Leu Pro Leu Phe Pro Val Gln Val
 1 5 10 15
 Gln Thr Leu Ile Val Val Ile Ile Gly Met Leu Val Leu Leu Leu
 20 25 30
 Asp Phe Leu Gly Leu Val His Leu Gly Gln Leu Leu Ile Phe His
 35 40 45
 Ile Tyr Leu Ser Met Ser Pro Thr Leu Ser Pro Arg Ser Pro Gln
 50 55 60
 Gly Trp Val Val Arg Ala Ala His Leu Thr Pro Leu Leu Glu Tyr
 65 70 75
 Val Pro Asn Pro Glu Pro Pro Thr Pro Gly Ala Arg Val Phe Val
 80 85 90
 Pro Arg Val Arg Met Cys Ser Gly Ser Ala Ser Pro Arg Ser Glu
 95 100 105
 Ile Met Asp Lys Lys Gly Lys Ser Gln Glu Glu Ile Lys Ser Met
 110 115 120
 Arg Thr Gln Gln Ala Gln Gln Glu Ala Glu Leu Thr Pro Arg Pro
 125 130 135
 Ala Gly Val Val Pro Gly Ala
 140

<210> 271
 <211> 1484
 <212> DNA
 <213> Homo sapiens

<400> 271
 ggagtgcaga tggcatcctt cggttcttcc agacaagctg caagacgctg 50
 accatggcca agatggagct ctogaaggcc ttctctggcc agcggacact 100
 cctatctgcc atcctcagca tgctatcact cagcttctcc acaacatccc 150
 tgctcagcaa ctactggttt gtgggcacac agaaggtgcc caagcccctg 200
 tgcgagaaaag gtctggcagc caagtgcttt gacatgccag tgtccctgga 250

tggagataacc aacacatcca cccaggaggt ggtacaatac aactgggaga 300
 ctgggggatga ccggttctcc ttccggagct tccggagtgg catgtggcta 350
 tcctgtgagg aaactgtgga agaaccaggg gagaggtgcc gaagtttcat 400
 tgaacttaca ccaccagcca agagaggtga gaaaggacta ctggaatttg 450
 ccacgttgca aggcccatgt caccctactc tccgatttgg aggggaagcgg 500
 ttgatggaga aggtctccct cccctcccct cccttggggc tttgtggcaa 550
 aaatcctatg gttatccctg ggaacgcaga tcacctacat cggacttcaa 600
 ttcatacagct tcctcctgct actaacagac ttgctactca ctgggaaccc 650
 tgcctgtggg ctcaaactga gcgcctttgc tgctgtttcc tctgtcctgt 700
 caggtctcct ggggatgggtg gccacatga tgtattcaca agtcttccaa 750
 gcgactgtca acttgggtcc agaagactgg agaccacatg tttggaatta 800
 tggctggggc ttctacatgg cctggtcttc cttcacctgc tgcattggcg 850
 cggctgtcac caccttcaac acgtacacca ggatgggtgct ggagttcaag 900
 tgcaagcata gtaagagctt caaggaaaac ccgaactgcc taccacatca 950
 ccatcagtgt ttccctcggc ggctgtcaag tgcagcccc accgtgggtc 1000
 ctttgaccag ctaccaccag tatcataatc agcccatcca ctctgtctct 1050
 gagggagtcg acttctactc cgagctgcgg aacaaggat ttcaaagagg 1100
 ggcagccag gagctgaaag aagcagttag gtcattctgta gaggaagagc 1150
 agtgtttaga gttaagcggg tttggggagt aggcttgagc cctaccttac 1200
 acgtctgctg attatcaaca tgtgcttaag ccaacatccg tctcttgagc 1250
 atggttttta gaggtctacga ataaggctat gaataagggt tatctttaag 1300
 tcctaaggga ttcttgggtg ccaactgctc ttttctctct acagctccat 1350
 cttgtttcac ccacccacaca tctcacacat ccagaattcc cttctttact 1400
 gatagtttct gtgccaggtt ctgggctaaa ccatggagat aaaaagaaga 1450
 gtaaaatata cttcccgacc ttaaggatct gaaa 1484

<210> 272

<211> 285

<212> PRT

<213> Homo sapiens

<400> 272

Met	Ala	Lys	Met	Glu	Leu	Ser	Lys	Ala	Phe	Ser	Gly	Gln	Arg	Thr
1				5					10					15

Leu	Leu	Ser	Ala	Ile	Leu	Ser	Met	Leu	Ser	Leu	Ser	Phe	Ser	Thr
				20					25					30

Thr	Ser	Leu	Leu	Ser	Asn	Tyr	Trp	Phe	Val	Gly	Thr	Gln	Lys	Val
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

35					40					45				
Pro	Lys	Pro	Leu	Cys	Glu	Lys	Gly	Leu	Ala	Ala	Lys	Cys	Phe	Asp
				50					55					60
Met	Pro	Val	Ser	Leu	Asp	Gly	Asp	Thr	Asn	Thr	Ser	Thr	Gln	Glu
				65					70					75
Val	Val	Gln	Tyr	Asn	Trp	Glu	Thr	Gly	Asp	Asp	Arg	Phe	Ser	Phe
				80					85					90
Arg	Ser	Phe	Arg	Ser	Gly	Met	Trp	Leu	Ser	Cys	Glu	Glu	Thr	Val
				95					100					105
Glu	Glu	Pro	Gly	Glu	Arg	Cys	Arg	Ser	Phe	Ile	Glu	Leu	Thr	Pro
				110					115					120
Pro	Ala	Lys	Arg	Gly	Glu	Lys	Gly	Leu	Leu	Glu	Phe	Ala	Thr	Leu
				125					130					135
Gln	Gly	Pro	Cys	His	Pro	Thr	Leu	Arg	Phe	Gly	Gly	Lys	Arg	Leu
				140					145					150
Met	Glu	Lys	Ala	Ser	Leu	Pro	Ser	Pro	Pro	Leu	Gly	Leu	Cys	Gly
				155					160					165
Lys	Asn	Pro	Met	Val	Ile	Pro	Gly	Asn	Ala	Asp	His	Leu	His	Arg
				170					175					180
Thr	Ser	Ile	His	Gln	Leu	Pro	Pro	Ala	Thr	Asn	Arg	Leu	Ala	Thr
				185					190					195
His	Trp	Glu	Pro	Cys	Leu	Trp	Ala	Gln	Thr	Glu	Arg	Leu	Cys	Cys
				200					205					210
Cys	Phe	Leu	Cys	Pro	Val	Arg	Ser	Pro	Gly	Asp	Gly	Gly	Pro	His
				215					220					225
Asp	Val	Phe	Thr	Ser	Leu	Pro	Ser	Asp	Cys	Gln	Leu	Gly	Ser	Arg
				230					235					240
Arg	Leu	Glu	Thr	Thr	Cys	Leu	Glu	Leu	Trp	Leu	Gly	Leu	Leu	His
				245					250					255
Gly	Leu	Ala	Leu	Leu	His	Leu	Leu	His	Gly	Val	Gly	Cys	His	His
				260					265					270
Leu	Gln	His	Val	His	Gln	Asp	Gly	Ala	Gly	Val	Gln	Val	Gln	Ala
				275					280					285

<210> 273

<211> 1158

<212> DNA

<213> Homo sapiens

<400> 273

aactggaagg aaagaaagaa aggtcagctt tggcccagat gtggttaccc 50

cttggtctcc tgtctttatg tctttctcct cttcctattc tgcatctcc 100

ctcacttaag tctcaggcct gtcagcagct cctgtggaca ttgccatccc 150

ctctggtagc cttcagagca aacaggacaa cctatgttat ggatgtttcc 200

accaaccagg gtagtggcat ggagcaccgt aaccatctgt gcttctgtga 250
 tctctatgac agagccactt ctccacctct gaaatgttcc ctgctctgaa 300
 atctggcatg agatggcaca ggtgaccacg cagaagccac cagaatcttg 350
 cotgccttat tctcctccc aagtctgttc tcttattgtc aacctcagca 400
 caacaggctg gcgccaatgg cattacagag aaagcaatct gtgtggctag 450
 tgggcagatt accatgcaag ccccgaggaga aatggaggag cttttagacc 500
 acctccctgt cagccagtat taacatgtcc ccttccccct gccccgcct 550
 agattcagga cattcgcccc tgtgtgccac caaaccagga ctttccccct 600
 ggcttggcat ccctggctct ctcttggtac ccagcaagac gtctgttcca 650
 gggcagtgtg gcatctttca agctccgtta ctatggcgat ggccatgatg 700
 ttacaatccc acttgccctga ataatacaagt gggaagggga agcagaggga 750
 aatggggcca tgtgaatgca gctgctctgt tctccctacc ctgaggaaaa 800
 accaaagggga agcaacagga acttctgcaa ctggttttta tcggaaagat 850
 catcctgcct gcagatgctg ttgaaggggc acaagaaatg tagctggaga 900
 agattgatga aagtgcaggt gtgtaaggaa atagaacagt ctgctgggag 950
 tcagacctgg aattctgatt ccaaactctt tattactttg ggaagtcact 1000
 cagcctcccc gtagccatct ccagggtgac ggaaccctagt gtattacctg 1050
 ctggaaccaa ggaaactaac aatgtaggtt actagtgaat accccaatgg 1100
 tttctccaat tatgcccctg ccacccaaaac aataaaacaa aattctctaa 1150
 cactgaaa 1158

<210> 274
 <211> 86
 <212> PRT
 <213> Homo sapiens

<400> 274
 Met Trp Leu Pro Leu Gly Leu Leu Ser Leu Cys Leu Ser Pro Leu
 1 5 10 15
 Pro Ile Leu Ser Ser Pro Ser Leu Lys Ser Gln Ala Cys Gln Gln
 20 25 30
 Leu Leu Trp Thr Leu Pro Ser Pro Leu Val Ala Phe Arg Ala Asn
 35 40 45
 Arg Thr Thr Tyr Val Met Asp Val Ser Thr Asn Gln Gly Ser Gly
 50 55 60
 Met Glu His Arg Asn His Leu Cys Phe Cys Asp Leu Tyr Asp Arg
 65 70 75
 Ala Thr Ser Pro Pro Leu Lys Cys Ser Leu Leu
 80 85

<210> 275
<211> 2694
<212> DNA
<213> Homo sapiens

<400> 275
gtagcgcgtc ttgggtctcc cggctgccgc tgctgccgc gccgcctcgg 50
gtcgtggagc caggagcgcac gtcaccgcca tggcaggcat caaagctttg 100
attagtttgt cctttggagg agcaatcgga ctgatgtttt tgatgcttgg 150
atgtgccctt ccaatataca acaaatactg gccctctttt gttctatttt 200
tttacatcct ttcacctatt ccatactgca tagcaagaag attagtggat 250
gatacagatg ctatgagtaa cgcttgtaag gaacttgcca tctttcttac 300
aacgggcatt gtcgtgtcag cttttggact ccctattgta tttgccagag 350
cacatctgat tgagtgggga gcttgtgcac ttgttctcac aggaaacaca 400
gtcatctttg caactatact aggctttttc ttggtctttg gaagcaatga 450
cgacttcagc tggcagcagt ggtgaaaaga aattactgaa ctattgtcaa 500
atggacttcc tgtcatttgt tggccattca cgcacacagg agatggggca 550
gttaatgctg aatgggtatag caagcctctt ggggggtattt taggtgctcc 600
cttctcactt ttattgtaag catactattt tcacagagac ttgctgaagg 650
attaaaagga ttttctcttt tggaaaagct tgactgattt cacacttata 700
tatagtatgc tttttgtggg gtccctgctga atttaaatat ttatgtgttt 750
ttcctgttag gttgattttt tttggaatca atatgcaatg ttaaacactt 800
ttttaatgta atcatttgca ttggttagga attcagaatt ccgccggctc 850
tattactggg caagtacatc ttttctctta aaattattta gcctccatta 900
ttacaaaaaa ttataaaaat aagttttcag tcagtcagga tgacatcact 950
cccaatgtta tgcagacata cagacggttg gcatacgtta tagactgtat 1000
actcagtgca aatatagctg catttatacc tcagaggggc caagtgttaa 1050
tgcccatgcc ctccgttaag ggttggttgg tttactggta gacagatgtt 1100
ttgtggattg aaaattattt tatggaattg ctacagagga gtgcttttct 1150
tctcaattgt tagaagaatt tatgttaaac ttttaaggtaa ggggtgtaaaa 1200
acatttttga gataagggtt ttatttatgt ttattattgt tagagtgagt 1250
tgcaatgtgg gaagaaatga cattgaaatt ccagtttttg aatcctgttt 1300
ctatttataa gtgaaatttg tgatctccta tcaacctttc atgttttacc 1350
ctgttaaaaat ggacatacat ggaaccacta ctgatgaggg acagttgtat 1400
gtttgcatca tatatgccag aaaaccttcc tctgcttcc ctttttgact 1450

tatttgggtat gttgtatata ttacataaaa taacttttca aatatagttt 1500
aataacactt agaagtgttt acttacctgg aaaataattg ctatgccgta 1550
cattcagagt gccccctccc ctgcaaggcc ttgccatgat taacaagtaa 1600
cttgtagtgc ttacagataa ttcatgcatt aacagtttaa gatttagacc 1650
atggtaatag tagttcttat tctctaaggt tatatcatat gtaattttaa 1700
agtattttta agacaagttt cctgtatacc tctgaactgt tttgattttg 1750
agttcatcat gatagatctg ctgtttcctt ataaaaggca tttgttgtgt 1800
gagttaatgc aaagtagcca agtccagcta tatagcagct tcagaaacat 1850
acctgaccaa aaaattccca gtaaccaggc atgatcaatt tatagtggtc 1900
gtttacatct aataattatc aggacttttt tcaggagtgg gttataaaaa 1950
cattcaagtt ggtctgacag tattttgtta aggatatttg tttgtatgtt 2000
tattcagtat acttacataa aaattatttc gccatcagcc aaaactcagt 2050
aatcatgaca gctgtctgtt gttttatgaa gtttattttc caagaaaatg 2100
ggaataaatt tgggatttgt tcagcttttt tactaaagat gcctaaagcc 2150
acaggtttta ttgcctaact taagccatga ctttttagata tgagatgacg 2200
ggaagcagga cgaaatatcg gcgtgtggct ggagccttcc cactggaggc 2250
tgaaagtggc ttgtggtatt ataatgttca gatttcaaga ggaaggtgca 2300
ggtacacatg agttagagag ctggtgagac agttgggaac tctttgtgct 2350
tgtgatctac tggacttttt ttttgagga agtgcattct ctggtccttc 2400
cctattttct gttctggatg tcagtgcagt gcactgctac tgttttatcc 2450
acttggccac agactttttc taacagctgc gtattatttc tatatactaa 2500
ttgcattggc agcatttgtt ctttgacctt gtatactagc ttgacatagt 2550
gctgtctctg atttctaggc tagttacttg agatatgaat tttccataga 2600
atatgcactg atacaacatt accattcttc tatggaaaga aaacttttga 2650
tgatgaaaca ataaagattt taaatatcta ttttaaaaaa aaaa 2694

<210> 276

<211> 131

<212> PRT

<213> Homo sapiens

<400> 276

Met	Ala	Gly	Ile	Lys	Ala	Leu	Ile	Ser	Leu	Ser	Phe	Gly	Gly	Ala
1				5					10					15

Ile	Gly	Leu	Met	Phe	Leu	Met	Leu	Gly	Cys	Ala	Leu	Pro	Ile	Tyr
			20						25					30

Asn	Lys	Tyr	Trp	Pro	Leu	Phe	Val	Leu	Phe	Phe	Tyr	Ile	Leu	Ser
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

35	40	45
Pro Ile Pro Tyr Cys Ile Ala Arg Arg Leu Val Asp Asp Thr Asp		
50	55	60
Ala Met Ser Asn Ala Cys Lys Glu Leu Ala Ile Phe Leu Thr Thr		
65	70	75
Gly Ile Val Val Ser Ala Phe Gly Leu Pro Ile Val Phe Ala Arg		
80	85	90
Ala His Leu Ile Glu Trp Gly Ala Cys Ala Leu Val Leu Thr Gly		
95	100	105
Asn Thr Val Ile Phe Ala Thr Ile Leu Gly Phe Phe Leu Val Phe		
110	115	120
Gly Ser Asn Asp Asp Phe Ser Trp Gln Gln Trp		
125	130	

<210> 277
 <211> 4104
 <212> DNA
 <213> Homo sapiens

<400> 277
 cccacgcgtc cgcccacgcg tccgcccacg cgtccgccca cgcgtccgcc 50
 cacgcgtccg cccacgcgtc cgcccacgcg tccggtgcaa gctcgcgcgcg 100
 cacactgcct ggtggaggga aggagcccgc gcgcctctcg ccgctccccg 150
 cgccgcgcgc cgcacctccc caccgcccgc cgccgcgcgc ccgccgcgcg 200
 caaagcatga gtgagcccgc tctctgcagc tgcccggggc gcgaatggca 250
 ggctgtttcc gcggagtaaa aggtggcgcc ggtcagtggc cgttttccaat 300
 gacggacatt aaccagactg tcagatcctg gggagtcgcg agccccgagt 350
 ttggagtttt ttccccccac aacgtcacag tccgaactgc agaggggaaag 400
 gaaggcggca ggaaggcgaa gctcgggctc cggcacgtag ttgggaaact 450
 tgcgggctct agaagtgcgc tccccgcctt gccggccgcg cttgcagccc 500
 cgagccgagc agcaaagtga gacattgtgc gcctgccaga tccgccgggc 550
 gcggaccggg gctgcctcgg aaacacagag gggctcttct tcgccctgca 600
 tataattagc ctgcacacaa agggagcagc tgaatggagg ttgtcactct 650
 ctggaaaagg atttctgacc gagcgcttcc aatggacatt ctccagtctc 700
 tctggaaaga ttctcgctaa tggatttcct gctgctcggc ctctgtctat 750
 actggctgct gaggaggccc tcgggggtgg tcttgtgtct gctggggggc 800
 tgctttcaga tgctgcccgc cgccccagc gggcgccgcg agctgtgccg 850
 gtgcgagggg cggctgctgt actgcgaggc gctcaacctc accgaggcgc 900
 ccacaaacct gtccggcctg ctgggcttgc ccctgcgcta caacagcctc 950

tcggagctgc gcgccggcca gttcacgggg ttaatgcagc tcacgtggct 1000
 ctatctggat cacaatcaca tctgctccgt gcagggggac gcctttcaga 1050
 aactgcgccg agttaaggaa ctcacgtga gttccaacca gatcacccaa 1100
 ctgcccaca ccaccttccg gcccatgccc aacctgcgca gcgtggacct 1150
 ctcgtaaac aagctgcagg cgctcgcgcc cgacctcttc cacgggctgc 1200
 ggaagctcac cagctgcat atgcgggcca acgccatcca gtttgtgccc 1250
 gtgcgcatct tccaggactg cgcagcctc aagtttctcg acatcggata 1300
 caatcagctc aagagtctgg cgcgcaactc ttctgcgggc ttgtttaagc 1350
 tcaccgagct gcacctcgag cacaacgact tggtaaggt gaacttcgcc 1400
 caattcccgc gcctcatctc cctgcactcg ctctgcctgc ggaggaacaa 1450
 ggtggccatt gtggtcagct cgctggactg ggtttggaac ctggagaaaa 1500
 tggacttgtc gggcaacgag atcgagtaca tggagcccca tgtgttcgag 1550
 accgtgccgc acctgcagtc cctgcagctg gactccaacc gcctcaccta 1600
 catcgagccc cggatcctca actcttgaa gtccctgaca agcatcacc 1650
 tggccgggaa cctgtgggat tgcgggcgca acgtgtgtgc cctagcctcg 1700
 tggctcagca acttccaggg gcgctacgat ggcaacttgc agtgcgccag 1750
 cccggagtac gcacagggcg aggacgtcct ggacgccgtg tacgccttcc 1800
 acctgtgca ggatggggcc gagcccacca gcggccacct gctctcggcc 1850
 gtcaccaacc gcagtgatct ggggccccct gccagctcgg ccaccacgt 1900
 cgcggaacgc ggggaggggc agcacgacgg cacattcgag cctgccaccg 1950
 tggctcttcc aggcggcgag cacgccgaga acgccgtgca gatccacaag 2000
 gtggtcacgg gcaccatggc cctcatcttc tccttctca tcgtggtcct 2050
 ggtgctctac gtgtcctgga agtggttccc agccagcctc aggagctca 2100
 gacagtgtt tgctacgcag cgcaggaagc aaaagcagaa acagaccatg 2150
 catcagatgg ctgccatgtc tgcccaggaa tactacgttg attacaaacc 2200
 gaaccacatt gagggagccc tggatgatcat caacgagtat ggctcgtgta 2250
 cctgccacca gcagcccgcg agggaatgcg aggtgtgatt gtcccagtgg 2300
 ctctcaacc atgcgctacc aaatacgctt gggcagccgg gacgggccc 2350
 cgggcaccag gctgggtct ccttgtctgt gctctgatat gctccttgac 2400
 tgaaacttta aggggatctc tcccagagac ttgacatttt agctttattg 2450
 tgtcttaaaa acaaaagcga attaaaacac acaaaaaaac cccacccac 2500
 aaccttcagg acagtctatc ttaaatttca tatgagaact ccttctctcc 2550

tttgaagatc tgtccatatt caggaatctg agagtgtaaa aaaggtggcc 2600
 ataagacaga gagagaataa tcgtgctttg ttttatgcta ctccctccac 2650
 cctgcccattg attaaacatc atgtatgtag aagatcttaa gtccatacgc 2700
 atttcatgaa gaaccattgg aaagaggaat ctgcaatctg ggagcttaag 2750
 agcaaatgat gaccatagaa agctatgttc ttactttgtg tgtgtgtctg 2800
 tatgtttctg cgttgtgtgt ctttgtaggc aagcaaacgt tgtctacaca 2850
 aacgggaatt tagctcacat catttcatgc cctgtgcct ctagctctgg 2900
 agattgggtgg ggggaggtgg ggggaaacgg caggaataag ggaaagtgg 2950
 agttttaact aaggttttgt aacacttgaa atcttttctt tctcaaatta 3000
 attatcttta agcttcaaga aacttgcctt gacccctcta agcaaactac 3050
 taagcattta aaagagaatc taatttttaa aggtgtagca cttttttttt 3100
 tattcttccc acagaggggtg ctaatctcat tatgctgtgc tatctgaaaa 3150
 gaacttaagg ccacaattca cgtctcgtcc tgggcattgt gatggattga 3200
 ccctccattt gcagtacctt ccagctgat taaagttcag cagtgggtatt 3250
 gaggtttttc gaatatattat atagaaaaaa agtcttttca catgacaaat 3300
 gacactctca caccagtctt agccctagta gtttttttagg ttggaccaga 3350
 ggaagcagggt taaatgagac ctgtcctctg ctgcactcag aaaaaatagg 3400
 cagtccctga tgctcagatc tttagccttga tattaatagt tgagaccacc 3450
 taccacaat gcagcctata ctccaagac tacaaagtta ccatcgcaaa 3500
 ggaaagggtta ttccagtaaa aggaaatagt tttctcaacc atttaaaaat 3550
 attcttctga actcatcaaa gtagaagagc cccaacctt ttctctctgc 3600
 cttcaagaag gcagacattt ggtatgattt agcatcaaca acacatttat 3650
 gagtatatgt aagtaatcag aggggcaaat gccacttggt attcctccca 3700
 agttttccaa gcaagtacac acagatctct ggtaggatta ggggccactt 3750
 gtgtttccgg cttattttag tcgacttgtc agcaagtttg atgcctagtc 3800
 tatctgacat ggcccagtag aacagggcat tgatggatca catgagatgg 3850
 tagaaggaa atcatcacat acccctctca cagagaaaat tatcaaagaa 3900
 ccagaaatta tatctgtttt ggagcaagag tgtcataatg tttcagggtta 3950
 gtcaaaaata acataaatta tctcctctag atgagtggcg atgttggctg 4000
 atttgggtct gccattgaca gaatgtcaaa taaaaggaa ttagctagaa 4050
 tatgaccatt aaatgtgctt ctgaaatata ttttgagata ggtttagaat 4100
 gtca 4104

<210> 278
 <211> 522
 <212> PRT
 <213> Homo sapiens

<400> 278

Met	Asp	Phe	Leu	Leu	Leu	Gly	Leu	Cys	Leu	Tyr	Trp	Leu	Leu	Arg	1	5	10	15
Arg	Pro	Ser	Gly	Val	Val	Leu	Cys	Leu	Leu	Gly	Ala	Cys	Phe	Gln	20	25	30	
Met	Leu	Pro	Ala	Ala	Pro	Ser	Gly	Cys	Pro	Gln	Leu	Cys	Arg	Cys	35	40	45	
Glu	Gly	Arg	Leu	Leu	Tyr	Cys	Glu	Ala	Leu	Asn	Leu	Thr	Glu	Ala	50	55	60	
Pro	His	Asn	Leu	Ser	Gly	Leu	Leu	Gly	Leu	Ser	Leu	Arg	Tyr	Asn	65	70	75	
Ser	Leu	Ser	Glu	Leu	Arg	Ala	Gly	Gln	Phe	Thr	Gly	Leu	Met	Gln	80	85	90	
Leu	Thr	Trp	Leu	Tyr	Leu	Asp	His	Asn	His	Ile	Cys	Ser	Val	Gln	95	100	105	
Gly	Asp	Ala	Phe	Gln	Lys	Leu	Arg	Arg	Val	Lys	Glu	Leu	Thr	Leu	110	115	120	
Ser	Ser	Asn	Gln	Ile	Thr	Gln	Leu	Pro	Asn	Thr	Thr	Phe	Arg	Pro	125	130	135	
Met	Pro	Asn	Leu	Arg	Ser	Val	Asp	Leu	Ser	Tyr	Asn	Lys	Leu	Gln	140	145	150	
Ala	Leu	Ala	Pro	Asp	Leu	Phe	His	Gly	Leu	Arg	Lys	Leu	Thr	Thr	155	160	165	
Leu	His	Met	Arg	Ala	Asn	Ala	Ile	Gln	Phe	Val	Pro	Val	Arg	Ile	170	175	180	
Phe	Gln	Asp	Cys	Arg	Ser	Leu	Lys	Phe	Leu	Asp	Ile	Gly	Tyr	Asn	185	190	195	
Gln	Leu	Lys	Ser	Leu	Ala	Arg	Asn	Ser	Phe	Ala	Gly	Leu	Phe	Lys	200	205	210	
Leu	Thr	Glu	Leu	His	Leu	Glu	His	Asn	Asp	Leu	Val	Lys	Val	Asn	215	220	225	
Phe	Ala	His	Phe	Pro	Arg	Leu	Ile	Ser	Leu	His	Ser	Leu	Cys	Leu	230	235	240	
Arg	Arg	Asn	Lys	Val	Ala	Ile	Val	Val	Ser	Ser	Leu	Asp	Trp	Val	245	250	255	
Trp	Asn	Leu	Glu	Lys	Met	Asp	Leu	Ser	Gly	Asn	Glu	Ile	Glu	Tyr	260	265	270	
Met	Glu	Pro	His	Val	Phe	Glu	Thr	Val	Pro	His	Leu	Gln	Ser	Leu	275	280	285	

Gln	Leu	Asp	Ser	Asn	Arg	Leu	Thr	Tyr	Ile	Glu	Pro	Arg	Ile	Leu	290	295	300
Asn	Ser	Trp	Lys	Ser	Leu	Thr	Ser	Ile	Thr	Leu	Ala	Gly	Asn	Leu	305	310	315
Trp	Asp	Cys	Gly	Arg	Asn	Val	Cys	Ala	Leu	Ala	Ser	Trp	Leu	Ser	320	325	330
Asn	Phe	Gln	Gly	Arg	Tyr	Asp	Gly	Asn	Leu	Gln	Cys	Ala	Ser	Pro	335	340	345
Glu	Tyr	Ala	Gln	Gly	Glu	Asp	Val	Leu	Asp	Ala	Val	Tyr	Ala	Phe	350	355	360
His	Leu	Cys	Glu	Asp	Gly	Ala	Glu	Pro	Thr	Ser	Gly	His	Leu	Leu	365	370	375
Ser	Ala	Val	Thr	Asn	Arg	Ser	Asp	Leu	Gly	Pro	Pro	Ala	Ser	Ser	380	385	390
Ala	Thr	Thr	Leu	Ala	Asp	Gly	Gly	Glu	Gly	Gln	His	Asp	Gly	Thr	395	400	405
Phe	Glu	Pro	Ala	Thr	Val	Ala	Leu	Pro	Gly	Gly	Glu	His	Ala	Glu	410	415	420
Asn	Ala	Val	Gln	Ile	His	Lys	Val	Val	Thr	Gly	Thr	Met	Ala	Leu	425	430	435
Ile	Phe	Ser	Phe	Leu	Ile	Val	Val	Leu	Val	Leu	Tyr	Val	Ser	Trp	440	445	450
Lys	Cys	Phe	Pro	Ala	Ser	Leu	Arg	Gln	Leu	Arg	Gln	Cys	Phe	Val	455	460	465
Thr	Gln	Arg	Arg	Lys	Gln	Lys	Gln	Lys	Gln	Thr	Met	His	Gln	Met	470	475	480
Ala	Ala	Met	Ser	Ala	Gln	Glu	Tyr	Tyr	Val	Asp	Tyr	Lys	Pro	Asn	485	490	495
His	Ile	Glu	Gly	Ala	Leu	Val	Ile	Ile	Asn	Glu	Tyr	Gly	Ser	Cys	500	505	510
Thr	Cys	His	Gln	Gln	Pro	Ala	Arg	Glu	Cys	Glu	Val				515	520	

<210> 279

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 279

tccgtgcagg gggacgcctt tcagaaactg cgcogagtta aggaac 46

<210> 280

<211> 709

<212> DNA

<213> Homo sapiens

<400> 280
 gtgcaaggag ccgaggcgag atgggcggtcc tgggcccgggt cctgctgtgg 50
 ctgcagctct gcgcactgac ccaggcggtc tccaaactct ggggtcccaa 100
 cacggacttc gacgtcgag ccaactggag ccagaaccgg acccctgctg 150
 ccggcggcgc cgttgagttc ccggcggaca agatggtgtc agtcctggtg 200
 caagaaggtc acgccgtctc agacatgctc ctgccgtgg atggggaact 250
 cgtcctggct tcaggagccg gattcggcgt ctccagacgtg ggctcgcacc 300
 tggactgtgg cgcgggagaa cctgccgtct tccgcgactc tgaccgttc 350
 tcctggcatg acccgcacct gtggcgctct ggggacgagg cacctggcct 400
 cttcttcgtg gacgccgagc gcgtgccctg ccgccacgac gacgtcttct 450
 ttccgcctag tgcctccttc cgcgtggggc tcggccctgg cgctagcccc 500
 gtgcgtgtcc gcagcatctc ggctctgggc cggacgttca cgcgcgacga 550
 ggacctggct gttttcctgg cgtcccgccg gggccgccta cgcttcacg 600
 ggccgggccc gctgagcgtg ggccccgagg actgcgcgga cccgtcgggc 650
 tgcgtctgcg gcaacgcgga ggccgagccg tggatctgcg cggccctgct 700
 ccagcccct 709

<210> 281
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 281
 Met Gly Val Leu Gly Arg Val Leu Leu Trp Leu Gln Leu Cys Ala
 1 5 10 15
 Leu Thr Gln Ala Val Ser Lys Leu Trp Val Pro Asn Thr Asp Phe
 20 25 30
 Asp Val Ala Ala Asn Trp Ser Gln Asn Arg Thr Pro Cys Ala Gly
 35 40 45
 Gly Ala Val Glu Phe Pro Ala Asp Lys Met Val Ser Val Leu Val
 50 55 60
 Gln Glu Gly His Ala Val Ser Asp Met Leu Leu Pro Leu Asp Gly
 65 70 75
 Glu Leu Val Leu Ala Ser Gly Ala Gly Phe Gly Val Ser Asp Val
 80 85 90
 Gly Ser His Leu Asp Cys Gly Ala Gly Glu Pro Ala Val Phe Arg
 95 100 105
 Asp Ser Asp Arg Phe Ser Trp His Asp Pro His Leu Trp Arg Ser
 110 115 120
 Gly Asp Glu Ala Pro Gly Leu Phe Phe Val Asp Ala Glu Arg Val
 125 130 135

Pro	Cys	Arg	His	Asp	Asp	Val	Phe	Phe	Pro	Pro	Ser	Ala	Ser	Phe
				140					145					150
Arg	Val	Gly	Leu	Gly	Pro	Gly	Ala	Ser	Pro	Val	Arg	Val	Arg	Ser
				155					160					165
Ile	Ser	Ala	Leu	Gly	Arg	Thr	Phe	Thr	Arg	Asp	Glu	Asp	Leu	Ala
				170					175					180
Val	Phe	Leu	Ala	Ser	Arg	Ala	Gly	Arg	Leu	Arg	Phe	His	Gly	Pro
				185					190					195
Gly	Ala	Leu	Ser	Val	Gly	Pro	Glu	Asp	Cys	Ala	Asp	Pro	Ser	Gly
				200					205					210
Cys	Val	Cys	Gly	Asn	Ala	Glu	Ala	Gln	Pro	Trp	Ile	Cys	Ala	Ala
				215					220					225
Leu	Leu	Gln	Pro											

<210> 282
 <211> 644
 <212> DNA
 <213> Homo sapiens

<400> 282
 atcgcatcaa ttgggagtag catcttctc atgggaccag tgaaacagct 50
 gaagcgaatg tttgagccta ctggtttgat tgcaactatc atggtgctgt 100
 tgtgttttgc acttaccctg tgttctgcct tttggtggca taacaaggga 150
 cttgcactta tcttctgcat tttgcagtct ttggcattga cgtggtacag 200
 cctttccttc ataccatttg caagggatgc tgtgaagaag tgttttgccg 250
 tgtgtcttgc ataattcatg gccagtttta tgaagctttg gaaggcacta 300
 tggacagaag ctggtggaca gttttgtaac tatottcgaa acctctgtct 350
 tacagacatg tgccttttat cttgcagcaa tgtgttgctt gtgattcgaa 400
 catttgaggg ttacttttgg aagcaacaat acattctcga acctgaatgt 450
 cagtagcaca ggatgagaag tgggttctgt atottgtgga gtggaatctt 500
 cctcatgtac ctgtttcctc tctggatggt gtccactga attcccatga 550
 atacaaacct attcagcaac agcaaaaaaa aaaaaaaaaa aaaaaaaaaa 600
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 644

<210> 283
 <211> 77
 <212> PRT
 <213> Homo sapiens

<400> 283
 Met Gly Pro Val Lys Gln Leu Lys Arg Met Phe Glu Pro Thr Arg
 1 5 10 15
 Leu Ile Ala Thr Ile Met Val Leu Leu Cys Phe Ala Leu Thr Leu

	20		25		30
Cys Ser Ala Phe Trp Trp His Asn Lys Gly Leu Ala Leu Ile Phe					
	35		40		45
Cys Ile Leu Gln Ser Leu Ala Leu Thr Trp Tyr Ser Leu Ser Phe					
	50		55		60
Ile Pro Phe Ala Arg Asp Ala Val Lys Lys Cys Phe Ala Val Cys					
	65		70		75
Leu Ala					

<210> 284
 <211> 2623
 <212> DNA
 <213> Homo sapiens

<400> 284
 ttgagcgcag gtgagctcct ggcgcgttccg ggggcgttcc tccagtcacc 50
 ctcccgccgt taccgcgggc gcgcccggag gagtctctc cagaccctcc 100
 ctcccggttg tccaaactaa tacggactga acggatcgct gcgagggtgg 150
 gagagaaaat tagggggaga aaggacagag agagcaacta ccatccatag 200
 ccagatagat tatcttacac tgaactgatc aagtactttg aaaatgactt 250
 cgaaatttat cttggtgtcc ttcatacttg ctgcactgag tctttcaacc 300
 accttttctc tccaactaga ccagcaaaag gttctactag tttcttttga 350
 tggattccgt tgggattact tatataaagt tccaacgccc cattttcatt 400
 atattatgaa atatggtggt cacgtgaagc aagttactaa tgtttttatt 450
 acaaaaacct accctaacca ttatactttg gtaactggcc tctttgcaga 500
 gaatcatggg attgttgcaa atgatatggt tgaacctatt cggaacaaat 550
 ctttctctct ggatcacatg aatatttatg attccaagtt ttgggaagaa 600
 gcgacaccaa tatggatcac aaaccagagg gcaggacata ctagtgggtgc 650
 agccatgtgg cccggaacag atgtaaaaat acataagcgc tttcctactc 700
 attacatgcc ttacaatgag tcagtttcat ttgaagatag agttgcctaa 750
 attgttgaat ggtttacgtc aaaagagccc ataatcttg gtcttctcta 800
 ttgggaagac cctgatgaca tgggccacca tttgggacct gacagtcgcg 850
 tcatggggcc tgtcatttca gatattgaca agaagttagg atatctcata 900
 caaatgctga aaaaggcaaa gttgtggaac actctgaacc taatcatcac 950
 aagtgatcat ggaatgacgc agtgcctctga ggaaagggtta atagaacttg 1000
 accagtacct ggataaagac cactataccc tgattgatca atctccagta 1050
 gcagccatct tgccaaaaga aggtaaaatt gatgaagtct atgaagcact 1100

aactcacgct catcctaato ttactgttta caaaaaagaa gacgttccag 1150
aaaggtggca ttacaaatac aacagtcgaa ttcaaccaat catagcagtg 1200
gctgatgaag ggtggcacat ttacagaat aagtcagatg actttctgtt 1250
aggcaaccac ggttacgata atgcgttagc agatatgcat ccaatatattt 1300
tagcccatgg tcctgccttc agaaagaatt tctcaaaaga agccatgaac 1350
tccacagatt tgtaccact actatgccac ctctcaata tcaactgcat 1400
gccacacaat ggatcattct ggaatgtcca ggatctgctc aattcagcaa 1450
tgccaagggt ggtcccttat acacagagta ctatactcct ccctggtagt 1500
gttaaaccag cagaatatga ccaagagggg tcataccctt atttcatagg 1550
ggtctctctt ggcagcatta tagtgattgt attttttgta attttcatta 1600
agcatttaat tcacagtcaa atacctgcct tacaagatat gcatgctgaa 1650
atagctcaac cattattaca agcctaattgt tactttgaag tggatttgca 1700
tattgaagtg gagattccat aattatgtca gtgtttaaag gtttcaaatt 1750
ctgggaaacc agttccaaac atctgcagaa accattaagc agttacatat 1800
ttaggtatac acacacacac acacacacac atacacacac acggaccaaa 1850
atacttacac ctgcaaagga ataaagatgt gagagtatgt ctccattggt 1900
cactgtagca tagggataga taagatcctg ctttatttggt acttggcgca 1950
gataatgtat atatttagca actttgcaat atgtaaagta ccttatatat 2000
tgcactttta atttctctcc tgatgggtac ttttaattga aatgcacttt 2050
atggacagtt atgtcttata acttgattga aaatgacaac tttttgcacc 2100
catgtcacag aatacttggt acgcattggt caaactgaag gaaatttcta 2150
ataatcccga ataatgaaca tagaaatcta tctccataaa ttgagagaag 2200
aagaagggtga taagtgttga aaattaaatg tgataacctt tgaaccttga 2250
attttggaaga tgtattccca acagcagaat gcaactgtgg gcatttcttg 2300
tcttatttct ttccagagaa cgtgggtttc atttattttt ccctcaaaag 2350
agagtcaaat actgacagat tcgttctaaa tatattgttt ctgtcataaa 2400
attattgtga tttcctgatg agtcatatta ctgtgatttt cataataatg 2450
aagacaccat gaatatactt ttcttctata tagttcagca atggcctgaa 2500
tagaagcaac caggcaccat ctacagcaatg ttttctcttg tttgtaatta 2550
tttgctcctt tgaaaattaa atcactatta attacattaa aaatcaaatt 2600
ggataaaaaa aaaaaaaaaa aaa 2623

<210> 285

<211> 477
 <212> PRT
 <213> Homo sapiens

<400> 285

Met	Thr	Ser	Lys	Phe	Ile	Leu	Val	Ser	Phe	Ile	Leu	Ala	Ala	Leu	
1				5					10					15	
Ser	Leu	Ser	Thr	Thr	Phe	Ser	Leu	Gln	Leu	Asp	Gln	Gln	Lys	Val	
				20					25					30	
Leu	Leu	Val	Ser	Phe	Asp	Gly	Phe	Arg	Trp	Asp	Tyr	Leu	Tyr	Lys	
				35					40					45	
Val	Pro	Thr	Pro	His	Phe	His	Tyr	Ile	Met	Lys	Tyr	Gly	Val	His	
				50					55					60	
Val	Lys	Gln	Val	Thr	Asn	Val	Phe	Ile	Thr	Lys	Thr	Tyr	Pro	Asn	
				65					70					75	
His	Tyr	Thr	Leu	Val	Thr	Gly	Leu	Phe	Ala	Glu	Asn	His	Gly	Ile	
				80					85					90	
Val	Ala	Asn	Asp	Met	Phe	Asp	Pro	Ile	Arg	Asn	Lys	Ser	Phe	Ser	
				95					100					105	
Leu	Asp	His	Met	Asn	Ile	Tyr	Asp	Ser	Lys	Phe	Trp	Glu	Glu	Ala	
				110					115					120	
Thr	Pro	Ile	Trp	Ile	Thr	Asn	Gln	Arg	Ala	Gly	His	Thr	Ser	Gly	
				125					130					135	
Ala	Ala	Met	Trp	Pro	Gly	Thr	Asp	Val	Lys	Ile	His	Lys	Arg	Phe	
				140					145					150	
Pro	Thr	His	Tyr	Met	Pro	Tyr	Asn	Glu	Ser	Val	Ser	Phe	Glu	Asp	
				155					160					165	
Arg	Val	Ala	Lys	Ile	Val	Glu	Trp	Phe	Thr	Ser	Lys	Glu	Pro	Ile	
				170					175					180	
Asn	Leu	Gly	Leu	Leu	Tyr	Trp	Glu	Asp	Pro	Asp	Asp	Met	Gly	His	
				185					190					195	
His	Leu	Gly	Pro	Asp	Ser	Pro	Leu	Met	Gly	Pro	Val	Ile	Ser	Asp	
				200					205					210	
Ile	Asp	Lys	Lys	Leu	Gly	Tyr	Leu	Ile	Gln	Met	Leu	Lys	Lys	Ala	
				215					220					225	
Lys	Leu	Trp	Asn	Thr	Leu	Asn	Leu	Ile	Ile	Thr	Ser	Asp	His	Gly	
				230					235					240	
Met	Thr	Gln	Cys	Ser	Glu	Glu	Arg	Leu	Ile	Glu	Leu	Asp	Gln	Tyr	
				245					250					255	
Leu	Asp	Lys	Asp	His	Tyr	Thr	Leu	Ile	Asp	Gln	Ser	Pro	Val	Ala	
				260					265					270	
Ala	Ile	Leu	Pro	Lys	Glu	Gly	Lys	Phe	Asp	Glu	Val	Tyr	Glu	Ala	
				275					280					285	
Leu	Thr	His	Ala	His	Pro	Asn	Leu	Thr	Val	Tyr	Lys	Lys	Glu	Asp	

	290	295	300
Val Pro Glu Arg	Trp His Tyr Lys Tyr	Asn Ser Arg Ile Gln	Pro
	305	310	315
Ile Ile Ala Val	Ala Asp Glu Gly Trp	His Ile Leu Gln Asn	Lys
	320	325	330
Ser Asp Asp Phe	Leu Leu Gly Asn His	Gly Tyr Asp Asn Ala	Leu
	335	340	345
Ala Asp Met His	Pro Ile Phe Leu Ala	His Gly Pro Ala Phe	Arg
	350	355	360
Lys Asn Phe Ser	Lys Glu Ala Met Asn	Ser Thr Asp Leu Tyr	Pro
	365	370	375
Leu Leu Cys His	Leu Leu Asn Ile Thr	Ala Met Pro His Asn	Gly
	380	385	390
Ser Phe Trp Asn	Val Gln Asp Leu Leu	Asn Ser Ala Met Pro	Arg
	395	400	405
Val Val Pro Tyr	Thr Gln Ser Thr Ile	Leu Leu Pro Gly Ser	Val
	410	415	420
Lys Pro Ala Glu	Tyr Asp Gln Glu Gly	Ser Tyr Pro Tyr Phe	Ile
	425	430	435
Gly Val Ser Leu	Gly Ser Ile Ile Val	Ile Val Phe Phe Val	Ile
	440	445	450
Phe Ile Lys His	Leu Ile His Ser Gln	Ile Pro Ala Leu Gln	Asp
	455	460	465
Met His Ala Glu	Ile Ala Gln Pro Leu	Leu Gln Ala	
	470	475	

<210> 286
 <211> 1337
 <212> DNA
 <213> Homo sapiens

<400> 286
 ggatttttgt gatccgcgat tcgctccac gggcgggacc tttgtaactg 50
 cgggaggccc aggacaggcc caccctgcgg ggcgggaggc agccggggtg 100
 agggaggtga agaaaccaag acgcagagag gccaaagcccc ttgccttggg 150
 tcacacagcc aaaggaggca gagccagaac tcacaaccag atccagaggc 200
 aacagggaca tggccacctg ggacgaaaag gcagtcaccc gcagggccaa 250
 ggtggctccc gctgagagga tgagcaagtt ctttaaggcac ttcacggtcg 300
 tgggagacga ctaccatgcc tggaacatca actacaagaa atgggagaat 350
 gaagaggagg aggaggagga ggagcagcca ccacccacac cagtctcagg 400
 cgaggaaggc agagctgcag cccctgacgt tgcccctgcc cctggccccg 450
 caccagggc ccccttgac ttcaggggca tgttgaggaa actgttcagc 500

tcccacaggt ttcaggatcat catcatctgc ttggtggttc tggatgccct 550
 cctggtgctt gctgagctca tcttgacact gaagatcatc cagcccgaca 600
 agaataacta tgctgccatg gtattccact acatgagcat caccatcttg 650
 gtctttttta tgatggagat catctttaaa ttatttgtct tccgcctgag 700
 ttctttcacc acaagtttga gatcctggat gcccgctcgtg gtggtggtct 750
 cattcatcct ggacattgtc ctctgttcc aggagcacca gtttgaggct 800
 ctgggcctgc tgattctgct ccggtctgtg cgggtggccc ggatcatcaa 850
 tgggattatc atctcagtta agacacgttc agaacggcaa ctcttaaggt 900
 taaaacagat gaatgtacaa ttggccgcca agattcaaca ctttgagttc 950
 agctgctctg agaagccctt ggactgatga gtttgctgta tcaacctgta 1000
 aggagaagct ctctccggat ggctatggga atgaaagaat ccgacttcta 1050
 ctctcacaca gccaccgtga aagtcctgga gtaaaatgtg ctgtgtacag 1100
 aagagagaga aggaagcagg ctggcatggt cactgggctg gtgttacgac 1150
 agagaacctg acagtcactg gccagttatc acttcagatt acaaatacaca 1200
 cagagcatct gcctgttttc aatcacaga gaacaaaacc aaaatctata 1250
 aagatattct gaaaatatga cagaatttga caaataaaag cataaacgtg 1300
 taaaaaaaa aaaaaaaaa aaaaaaaaa aaaaaaa 1337

<210> 287

<211> 255

<212> PRT

<213> Homo sapiens

<400> 287

Met	Ala	Thr	Trp	Asp	Glu	Lys	Ala	Val	Thr	Arg	Arg	Ala	Lys	Val
1				5					10					15
Ala	Pro	Ala	Glu	Arg	Met	Ser	Lys	Phe	Leu	Arg	His	Phe	Thr	Val
				20					25					30
Val	Gly	Asp	Asp	Tyr	His	Ala	Trp	Asn	Ile	Asn	Tyr	Lys	Lys	Trp
				35					40					45
Glu	Asn	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Gln	Pro	Pro	Pro	Thr
				50					55					60
Pro	Val	Ser	Gly	Glu	Glu	Gly	Arg	Ala	Ala	Ala	Pro	Asp	Val	Ala
				65					70					75
Pro	Ala	Pro	Gly	Pro	Ala	Pro	Arg	Ala	Pro	Leu	Asp	Phe	Arg	Gly
				80					85					90
Met	Leu	Arg	Lys	Leu	Phe	Ser	Ser	His	Arg	Phe	Gln	Val	Ile	Ile
				95					100					105
Ile	Cys	Leu	Val	Val	Leu	Asp	Ala	Leu	Leu	Val	Leu	Ala	Glu	Leu
				110					115					120

Ile	Leu	Asp	Leu	Lys	Ile	Ile	Gln	Pro	Asp	Lys	Asn	Asn	Tyr	Ala	
				125					130					135	
Ala	Met	Val	Phe	His	Tyr	Met	Ser	Ile	Thr	Ile	Leu	Val	Phe	Phe	
				140					145					150	
Met	Met	Glu	Ile	Ile	Phe	Lys	Leu	Phe	Val	Phe	Arg	Leu	Ser	Ser	
				155					160					165	
Phe	Thr	Thr	Ser	Leu	Arg	Ser	Trp	Met	Pro	Val	Val	Val	Val	Val	
				170					175					180	
Ser	Phe	Ile	Leu	Asp	Ile	Val	Leu	Leu	Phe	Gln	Glu	His	Gln	Phe	
				185					190					195	
Glu	Ala	Leu	Gly	Leu	Leu	Ile	Leu	Leu	Arg	Leu	Trp	Arg	Val	Ala	
				200					205					210	
Arg	Ile	Ile	Asn	Gly	Ile	Ile	Ile	Ser	Val	Lys	Thr	Arg	Ser	Glu	
				215					220					225	
Arg	Gln	Leu	Leu	Arg	Leu	Lys	Gln	Met	Asn	Val	Gln	Leu	Ala	Ala	
				230					235					240	
Lys	Ile	Gln	His	Leu	Glu	Phe	Ser	Cys	Ser	Glu	Lys	Pro	Leu	Asp	
				245					250					255	

<210> 288
 <211> 3334
 <212> DNA
 <213> Homo sapiens

<400> 288
 cggctcgagc tcgagccgaa tcggctcgag gggcagtgga gcacccagca 50
 ggccgccaac atgctctgtc tgtgctgtc cgtgccggtc atcggggaag 100
 cccagaccga gttccagtac tttgagtcga aggggctccc tgccgagctg 150
 aagtccattt tcaagctcag tgtcttcac ccctcccagg aattctccac 200
 ctaccgccag tggaagcaga aaattgtaca agctggagat aaggaccttg 250
 atgggcagct agactttgaa gaatttgtcc attatctcca agatcatgag 300
 aagaagctga ggctggtggt taagattttg gacaaaaaga atgatggacg 350
 cattgacgcg caggagatca tgcagtcctt gcgggacttg ggagtcaaga 400
 tatctgaaca gcaggcagaa aaaattctca agagcatgga taaaaacggc 450
 acgatgacca tcgactggaa cgagtggaga gactaccacc tctccaccc 500
 cgtggaaaac atccccgaga tcctcctcta ctggaagcat tccacgatct 550
 ttgatgtggg tgagaatcta acggtcccgg atgagttcac agtggaggag 600
 aggcagacgg ggatgtggtg gagacacctg gtggcaggag gtggggcagg 650
 ggccgtatcc agaacctgca cggccccctt ggacaggctc aaggtgctca 700
 tgcaggtcca tgcctcccg cagcaacaaca tgggcatcgt tgggtggcttc 750

actcagatga ttcgagaagg agggggccagg tcaactctggc ggggcaatgg 800
 catcaacgtc ctcaaaaattg cccocgaatc agccatcaaa ttcattggcct 850
 atgagcagat caagcgccctt gttggtagtg accaggagac tctgaggatt 900
 cacgagaggc ttgtggcagg gtcottggca gggggccatcg cccagagcag 950
 catctaccca atggagggtcc tgaagacccg gatggcgctg cggaagacag 1000
 gccagtactc aggaatgctg gactgcgcca ggaggatcct ggccagagag 1050
 ggggtggccg ccttctacaa aggctatgtc cccaacatgc tgggcatcat 1100
 cccctatgcc ggcacogacc ttgcagtcta cgagacgctc aagaatgcct 1150
 ggctgcagca ctatgcagtg aacagcgcgg accccggcgt gtttgtgctc 1200
 ctggcctgtg gcaccatgtc cagtacctgt ggccagctgg ccagctaccc 1250
 cctggcccta gtcaggaccc ggatgcaggc gcaagcctct attgagggcg 1300
 ctccggaggt gaccatgagc agcctcttca aacatatcct gcggaccgag 1350
 ggggccttcg ggctgtacag ggggctggcc cccaacttca tgaaggatcat 1400
 cccagctgtg agcatcagct acgtggtcta cgagaacctg aagatcacc 1450
 tgggcgtgca gtcgcggtga cggggggagg gccgcccggc agtggactcg 1500
 ctgatcctgg gccgcagcct ggggtgtgca gccatctcat tctgtgaatg 1550
 tgccaacact aagctgtctc gagccaagct gtgaaaacc tagacgcacc 1600
 cgcagggagg gtggggagag ctggcaggcc cagggttctt cctgctgacc 1650
 ccagcagacc ctctgtttg ttccagcgaa gaccacaggc attccttagg 1700
 gtccagggtc agcaggctcc gggctcacat gtgtaaggac aggacatttt 1750
 ctgcagtgcc tgccaatagt gagcttgagg cctggaggcc ggcttagttc 1800
 ttccatttca ccttgcagc cagctgttgg ccacggcccc tgccctctgg 1850
 tctgccgtgc atctccctgt gccctcttgc tgccctgctg tctgctgagg 1900
 taagggtgga ggagggctac agcccacatc ccacccctc gtccaatccc 1950
 ataatccatg atgaaagggt aggtcacgtg gcctcccagg cctgacttcc 2000
 caacctacag cattgacgcc aacttggtctg tgaaggaaga ggaaaggatc 2050
 tggccttctg gtcactggca tctgagccct gctgatggct ggggctctcg 2100
 ggcatgcttg ggagtgcagg gggctcgggc tgccctggcct ggctgcacag 2150
 aaggcaagtg ctggggctca tgggtgctctg agctggcctg gaccctgtca 2200
 ggatggggcc cacctcagaa ccaaaactcac tgtccccact gtggcatgag 2250
 ggcatggag caccatgttt gagggcgagg ggcagagcgt ttgtgtgttc 2300
 tggggaggga aggaaaagggt gttggaggcc ttaattatgg actgttggga 2350

aaagggtttt gtccagaagg acaagccgga caaatgagcg acttctgtgc 2400
 ttccagagga agacgagga gcaggagctt ggctgactgc tcagagtctg 2450
 ttctgacgcc ctgggggttc ctgtccaacc ccagcagggg cgcagcggga 2500
 ccagccccac attccacttg tgtcaactgct tggaacctat ttattttgta 2550
 tttatttgaa cagagttatg tcctaactat ttttatagat ttgtttaatt 2600
 aatagcttgt cattttcaag ttcatTTTTT attcatattt atgttcatgg 2650
 ttgattgtac cttcccaagc ccgcccagtg ggatgggagg aggaggagaa 2700
 ggggggcctt gggccgctgc agtcacatct gtccagagaa attccttttg 2750
 ggactggagg cagaaaagcg gccagaaggc agcagccctg gtccttttcc 2800
 tttggcaggt tggggaaggg cttgccccca gccttaggat ttcagggttt 2850
 gactgggggc gtggagagag agggaggaac ctcaataacc ttgaaggtgg 2900
 aatccagtta tttcctgcgc tgcgaggggtt tctttatttc actcttttct 2950
 gaatgtcaag gcagtgaggt gcctctcact gtgaatttgt ggtgggcggg 3000
 ggctggagga gaggggtggg ggctggctcc gtccctcca gccttctgct 3050
 gcccttgctt aacaatgccg gccaaactggc gacctcacgg ttgcacttcc 3100
 attccaccag aatgacctga tgaggaaatc ttcaatagga tgcaaagatc 3150
 aatgcaaaaa ttgttatata tgaacatata actggagtcg tcaaaaagca 3200
 aattaagaaa gaattggacg ttagaagttg tcattttaaag cagccttcta 3250
 ataaagttgt ttcaaagctg aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3300
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 3334

<210> 289
 <211> 469
 <212> PRT
 <213> Homo sapiens

<400> 289
 Met Leu Cys Leu Cys Leu Tyr Val Pro Val Ile Gly Glu Ala Gln
 1 5 10 15
 Thr Glu Phe Gln Tyr Phe Glu Ser Lys Gly Leu Pro Ala Glu Leu
 20 25 30
 Lys Ser Ile Phe Lys Leu Ser Val Phe Ile Pro Ser Gln Glu Phe
 35 40 45
 Ser Thr Tyr Arg Gln Trp Lys Gln Lys Ile Val Gln Ala Gly Asp
 50 55 60
 Lys Asp Leu Asp Gly Gln Leu Asp Phe Glu Glu Phe Val His Tyr
 65 70 75
 Leu Gln Asp His Glu Lys Lys Leu Arg Leu Val Phe Lys Ile Leu
 80 85 90

Asp	Lys	Lys	Asn	Asp	Gly	Arg	Ile	Asp	Ala	Gln	Glu	Ile	Met	Gln	95	100	105
Ser	Leu	Arg	Asp	Leu	Gly	Val	Lys	Ile	Ser	Glu	Gln	Gln	Ala	Glu	110	115	120
Lys	Ile	Leu	Lys	Ser	Met	Asp	Lys	Asn	Gly	Thr	Met	Thr	Ile	Asp	125	130	135
Trp	Asn	Glu	Trp	Arg	Asp	Tyr	His	Leu	Leu	His	Pro	Val	Glu	Asn	140	145	150
Ile	Pro	Glu	Ile	Ile	Leu	Tyr	Trp	Lys	His	Ser	Thr	Ile	Phe	Asp	155	160	165
Val	Gly	Glu	Asn	Leu	Thr	Val	Pro	Asp	Glu	Phe	Thr	Val	Glu	Glu	170	175	180
Arg	Gln	Thr	Gly	Met	Trp	Trp	Arg	His	Leu	Val	Ala	Gly	Gly	Gly	185	190	195
Ala	Gly	Ala	Val	Ser	Arg	Thr	Cys	Thr	Ala	Pro	Leu	Asp	Arg	Leu	200	205	210
Lys	Val	Leu	Met	Gln	Val	His	Ala	Ser	Arg	Ser	Asn	Asn	Met	Gly	215	220	225
Ile	Val	Gly	Gly	Phe	Thr	Gln	Met	Ile	Arg	Glu	Gly	Gly	Ala	Arg	230	235	240
Ser	Leu	Trp	Arg	Gly	Asn	Gly	Ile	Asn	Val	Leu	Lys	Ile	Ala	Pro	245	250	255
Glu	Ser	Ala	Ile	Lys	Phe	Met	Ala	Tyr	Glu	Gln	Ile	Lys	Arg	Leu	260	265	270
Val	Gly	Ser	Asp	Gln	Glu	Thr	Leu	Arg	Ile	His	Glu	Arg	Leu	Val	275	280	285
Ala	Gly	Ser	Leu	Ala	Gly	Ala	Ile	Ala	Gln	Ser	Ser	Ile	Tyr	Pro	290	295	300
Met	Glu	Val	Leu	Lys	Thr	Arg	Met	Ala	Leu	Arg	Lys	Thr	Gly	Gln	305	310	315
Tyr	Ser	Gly	Met	Leu	Asp	Cys	Ala	Arg	Arg	Ile	Leu	Ala	Arg	Glu	320	325	330
Gly	Val	Ala	Ala	Phe	Tyr	Lys	Gly	Tyr	Val	Pro	Asn	Met	Leu	Gly	335	340	345
Ile	Ile	Pro	Tyr	Ala	Gly	Ile	Asp	Leu	Ala	Val	Tyr	Glu	Thr	Leu	350	355	360
Lys	Asn	Ala	Trp	Leu	Gln	His	Tyr	Ala	Val	Asn	Ser	Ala	Asp	Pro	365	370	375
Gly	Val	Phe	Val	Leu	Leu	Ala	Cys	Gly	Thr	Met	Ser	Ser	Thr	Cys	380	385	390
Gly	Gln	Leu	Ala	Ser	Tyr	Pro	Leu	Ala	Leu	Val	Arg	Thr	Arg	Met	395	400	405

Gln	Ala	Gln	Ala	Ser	Ile	Glu	Gly	Ala	Pro	Glu	Val	Thr	Met	Ser	410	415	420
Ser	Leu	Phe	Lys	His	Ile	Leu	Arg	Thr	Glu	Gly	Ala	Phe	Gly	Leu	425	430	435
Tyr	Arg	Gly	Leu	Ala	Pro	Asn	Phe	Met	Lys	Val	Ile	Pro	Ala	Val	440	445	450
Ser	Ile	Ser	Tyr	Val	Val	Tyr	Glu	Asn	Leu	Lys	Ile	Thr	Leu	Gly	455	460	465

Val Gln Ser Arg

<210> 290
 <211> 1658
 <212> DNA
 <213> Homo sapiens

<400> 290
 ggaaggcagc ggcagctcca ctcagccagt acccagatac gctgggaacc 50
 ttccccagcc atggcttccc tggggcagat cctcttctgg agcataatta 100
 gcatcatcat tattctggct ggagcaattg cactcatcat tggctttggt 150
 atttcaggga gacactccat cacagtcact actgtcgct cagctgggaa 200
 cattggggag gatggaatcc tgagctgcac ttttgaacct gacatcaaac 250
 tttctgatat cgtgatacaa tggctgaagg aagggtgttt aggcttggtc 300
 catgagttca aagaaggcaa agatgagctg tcggagcagg atgaaatgtt 350
 cagaggccgg acagcagtgt ttgctgatca agtgatagtt ggcaatgcct 400
 ctttgccggt gaaaaacgtg caactcacag atgctggcac ctacaaatgt 450
 tatatcatca cttctaaagg caagggaat gctaaccttg agtataaaac 500
 tggagccttc agcatgccg aagtgaatgt ggactataat gccagctcag 550
 agaccttgcg gtgtgaggct cccgatggg tccccagcc cacagtgggtc 600
 tgggcatccc aagttgacca gggagccaac ttctcggaag tctccaatac 650
 cagctttgag ctgaactctg agaatgtgac catgaagggt gtgtctgtgc 700
 tctacaatgt tacgatcaac aacacatact cctgtatgat tgaaaatgac 750
 attgccaaaag caacagggga tatcaaagt acagaatcgg agatcaaaag 800
 gcggagtcac ctacagctgc taaactcaaa ggcttctctg tgtgtctctt 850
 ctttctttgc catcagctgg gcacttctgc ctctcagccc ttacctgatg 900
 ctaaaataat gtgccttggc cacaaaaaag catgcaaagt cattgttaca 950
 acagggatct acagaactat ttcaaccacca gatatgacct agttttatat 1000
 ttctgggagg aaatgaattc atatctagaa gtctggagtg agcaaacaag 1050

agcaagaaac aaaaagaagc caaaagcaga aggcaccaat atgaacaaga 1100
 taaatctatc ttcaaagaca tattagaagt tgggaaaata attcatgtga 1150
 actagacaag tgtgttaaga gtgataagta aaatgcacgt ggagacaagt 1200
 gcatccccag atctcagga cctccccctg cctgtcacct ggggagtgag 1250
 aggacaggat agtgcattgt ctttgtctct gaatttttag ttatatgtgc 1300
 tgtaatgttg ctctgaggaa gccctggaa agtctatccc aacatatcca 1350
 catcttatat tccacaaatt aagctgtagt atgtacccta agacgctgct 1400
 aattgactgc cacttcgcaa ctcaggggag gctgcatttt agtaatgggt 1450
 caaatgattc actttttatg atgcttccaa aggtgccttg gcttctcttc 1500
 ccaactgaca aatgccaaag ttgagaaaaa tgatcataat tttagcataa 1550
 acagagcagt cggggacacc gattttataa ataaactgag caccttcttt 1600
 ttaaacaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1650
 aaaaaaaaa 1658

<210> 291
 <211> 282
 <212> PRT
 <213> Homo sapiens

<400> 291
 Met Ala Ser Leu Gly Gln Ile Leu Phe Trp Ser Ile Ile Ser Ile
 1 5 10 15
 Ile Ile Ile Leu Ala Gly Ala Ile Ala Leu Ile Ile Gly Phe Gly
 20 25 30
 Ile Ser Gly Arg His Ser Ile Thr Val Thr Thr Val Ala Ser Ala
 35 40 45
 Gly Asn Ile Gly Glu Asp Gly Ile Leu Ser Cys Thr Phe Glu Pro
 50 55 60
 Asp Ile Lys Leu Ser Asp Ile Val Ile Gln Trp Leu Lys Glu Gly
 65 70 75
 Val Leu Gly Leu Val His Glu Phe Lys Glu Gly Lys Asp Glu Leu
 80 85 90
 Ser Glu Gln Asp Glu Met Phe Arg Gly Arg Thr Ala Val Phe Ala
 95 100 105
 Asp Gln Val Ile Val Gly Asn Ala Ser Leu Arg Leu Lys Asn Val
 110 115 120
 Gln Leu Thr Asp Ala Gly Thr Tyr Lys Cys Tyr Ile Ile Thr Ser
 125 130 135
 Lys Gly Lys Gly Asn Ala Asn Leu Glu Tyr Lys Thr Gly Ala Phe
 140 145 150
 Ser Met Pro Glu Val Asn Val Asp Tyr Asn Ala Ser Ser Glu Thr

	155		160		165
Leu Arg Cys Glu	Ala Pro Arg Trp Phe	Pro Gln Pro Thr Val	Val		
	170	175	180		
Trp Ala Ser Gln	Val Asp Gln Gly Ala	Asn Phe Ser Glu Val	Ser		
	185	190	195		
Asn Thr Ser Phe	Glu Leu Asn Ser Glu	Asn Val Thr Met Lys	Val		
	200	205	210		
Val Ser Val Leu	Tyr Asn Val Thr Ile	Asn Asn Thr Tyr Ser	Cys		
	215	220	225		
Met Ile Glu Asn	Asp Ile Ala Lys Ala	Thr Gly Asp Ile Lys	Val		
	230	235	240		
Thr Glu Ser Glu	Ile Lys Arg Arg Ser	His Leu Gln Leu Leu	Asn		
	245	250	255		
Ser Lys Ala Ser	Leu Cys Val Ser Ser	Phe Phe Ala Ile Ser	Trp		
	260	265	270		
Ala Leu Leu Pro	Leu Ser Pro Tyr Leu	Met Leu Lys			
	275	280			

<210> 292
 <211> 1484
 <212> DNA
 <213> Homo sapiens

<400> 292
 gaattttag aagacagcgg cgttgccatg gcggcgtctc tggggcaggt 50
 gttggctctg gtgctggtgg ccgctctgtg ggggtggcacg cagccgctgc 100
 tgaagcgggc ctccgccggc ctgcagcggg ttcattgagcc gacctgggcc 150
 cagcagttgc tacaggagat gaagaccctc ttcttgaata ctgagtacct 200
 gatgcccttt ctcctcaacc agtgtggatc ccttctctat tacctcacct 250
 tggcatcgac agatctgacc ctggctgtgc ccatctgtaa ctctctggct 300
 atcatcttca cactgattgt tgggaaggcc cttggagaag atattggtgg 350
 aaaacgtaag ttagactact gcgagtgcgg gacgcagctc tgtggatctc 400
 gacatacctg tgtagttcc ttcccagaac ccatctcccc agagtgggtg 450
 aggacacggc cttttcccat cctgcccttt cctctgcagc tgttttgctt 500
 ccttgtaggc atcagagttc ccttcccctg gacagtctgg agaaagacag 550
 aggctggggt ttgggattga agaccagacc ccatctgagc ccttccctca 600
 gccctgtacc agctcctact ggcatggctg agctcagacc ctctgattt 650
 ctgcctatta tcccaggagc agttgctggc atggtgctca ccgtgatagg 700
 aatttcactc tgcattcaca gctcagtgag taagaccagc gggcaacagt 750
 ctaccctttg agtgggcccga acccacttcc agctctgctg cctccaggaa 800

gcccctgggc catgaagtgc tggcagtgag cggatggacc tagcacttcc 850
 cctctctggc cttagcttcc tcctctctta tggggataac agctacctca 900
 tggatcacia taagagaaca agagtgaag agttttgtaa ctttcaagt 950
 ctgttcagct gcggggattt agcacaggag actctacgct caccctcagc 1000
 aacctttctg cccagcagc tctcttcctg ctaacatctc aggctcccag 1050
 cccagccacc attactgtgg cctgatctgg actatcatgg tggcaggttc 1100
 catggactgc agaactccag ctgcatggaa agggccagct gcagactttg 1150
 agccagaaat gcaaacggga ggcctctggg actcagtcag agcgctttgg 1200
 ctgaatgagg ggtggaaccg agggaagaag gtgcgtcgga gtggcagatg 1250
 caggaaatga gctgtctatt agccttgcc tccccacca tgaggtaggc 1300
 agaaatcctc actgccagcc cctcttaaac aggtagagag ctgtgagccc 1350
 cagccccacc tgactccagc acacctggcg agtagtagct gtcaataaat 1400
 ctatgtaaac agacaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1450
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 1484

<210> 293
 <211> 180
 <212> PRT
 <213> Homo sapiens

<400> 293
 Met Ala Ala Ser Leu Gly Gln Val Leu Ala Leu Val Leu Val Ala
 1 5 10 15
 Ala Leu Trp Gly Gly Thr Gln Pro Leu Leu Lys Arg Ala Ser Ala
 20 25 30
 Gly Leu Gln Arg Val His Glu Pro Thr Trp Ala Gln Gln Leu Leu
 35 40 45
 Gln Glu Met Lys Thr Leu Phe Leu Asn Thr Glu Tyr Leu Met Pro
 50 55 60
 Phe Leu Leu Asn Gln Cys Gly Ser Leu Leu Tyr Tyr Leu Thr Leu
 65 70 75
 Ala Ser Thr Asp Leu Thr Leu Ala Val Pro Ile Cys Asn Ser Leu
 80 85 90
 Ala Ile Ile Phe Thr Leu Ile Val Gly Lys Ala Leu Gly Glu Asp
 95 100 105
 Ile Gly Gly Lys Arg Lys Leu Asp Tyr Cys Glu Cys Gly Thr Gln
 110 115 120
 Leu Cys Gly Ser Arg His Thr Cys Val Ser Ser Phe Pro Glu Pro
 125 130 135
 Ile Ser Pro Glu Trp Val Arg Thr Arg Pro Phe Pro Ile Leu Pro
 140 145 150

Phe Pro Leu Gln Leu Phe Cys Phe Leu Val Ala Ile Arg Val Pro
 155 160 165

Phe Pro Trp Thr Val Trp Arg Lys Thr Glu Ala Gly Val Trp Asp
 170 175 180

<210> 294

<211> 1164

<212> DNA

<213> Homo sapiens

<400> 294

cttctgtagg acagtcacca ggccagatcc agaagcctct ctaggctcca 50
 gctttctctg tggaagatga cagcaattat agcaggaccc tgccaggctg 100
 tcgaaaagat tccgcaataa aactttgcca gtgggaagta cctagtgaaa 150
 cggcctaaga tgccacttct tctcatgtcc caggetttag gccctgtggt 200
 ccccatcctt gggagaagtc agctccagca ccatgaaggg catcctcggt 250
 gctggtatca ctgcagtgtc tgttgacagt gtagaatctc tgagctgcgt 300
 gcagtgtaat tcatgggaaa aatcctgtgt caacagcatt gcctctgaat 350
 gtccctcaca tgccaacacc agctgtatca gctcctcagc cagctcctct 400
 ctagagacac cagtcagatt ataccagaat atgttctgct cagcggagaa 450
 ctgcagttag gagacacaca ttacagcctt cactgtccac gtgtctgctg 500
 aagaacactt tcattttgta agccagtgtc gccaaggaaa ggaatgcagc 550
 aacaccagcg atgccctgga cctccccctg aagaacgtgt ccagcaacgc 600
 agagtgcctt gcttggttatg aatctaattg aacttcctgt cgtgggaagc 650
 cctggaaatg ctatgaagaa gaacagtgtg tctttctagt tgcagaactt 700
 aagaatgaca ttgagtctaa gagtctcgtg ctgaaaggct gttccaacgt 750
 cagtaacgcc acctgtcagt tctgtctggt tgaaaacaag actcttgag 800
 gagtcatctt tcgaaagttt gagtgtgcaa atgtaaacag cttaaccccc 850
 acgtctgcac caaccacttc ccacaacgtg ggctccaaag cttccctcta 900
 cctcttgccc cttgccagcc tccttcttcg gggactgctg ccctgaggtc 950
 ctggggctgc actttgccc gcacccatt tctgcttctc tgagggtccag 1000
 agcaccacct gcggtgctga caccctcttt cctgctctg ccccgtttaa 1050
 ctgcccagta agtgggagtc acaggtctcc aggcaatgcc gacagctgcc 1100
 ttgttcttca ttattaaagc actggttcat tcactgcaa aaaaaaaaaa 1150
 aaaaaaaaaa aaaa 1164

<210> 295

<211> 237

<212> PRT

<213> Homo sapiens

<400> 295

Met	Lys	Gly	Ile	Leu	Val	Ala	Gly	Ile	Thr	Ala	Val	Leu	Val	Ala	
1				5					10					15	
Ala	Val	Glu	Ser	Leu	Ser	Cys	Val	Gln	Cys	Asn	Ser	Trp	Glu	Lys	
				20					25					30	
Ser	Cys	Val	Asn	Ser	Ile	Ala	Ser	Glu	Cys	Pro	Ser	His	Ala	Asn	
				35					40					45	
Thr	Ser	Cys	Ile	Ser	Ser	Ser	Ala	Ser	Ser	Ser	Leu	Glu	Thr	Pro	
				50					55					60	
Val	Arg	Leu	Tyr	Gln	Asn	Met	Phe	Cys	Ser	Ala	Glu	Asn	Cys	Ser	
				65					70					75	
Glu	Glu	Thr	His	Ile	Thr	Ala	Phe	Thr	Val	His	Val	Ser	Ala	Glu	
				80					85					90	
Glu	His	Phe	His	Phe	Val	Ser	Gln	Cys	Cys	Gln	Gly	Lys	Glu	Cys	
				95					100					105	
Ser	Asn	Thr	Ser	Asp	Ala	Leu	Asp	Pro	Pro	Leu	Lys	Asn	Val	Ser	
				110					115					120	
Ser	Asn	Ala	Glu	Cys	Pro	Ala	Cys	Tyr	Glu	Ser	Asn	Gly	Thr	Ser	
				125					130					135	
Cys	Arg	Gly	Lys	Pro	Trp	Lys	Cys	Tyr	Glu	Glu	Glu	Gln	Cys	Val	
				140					145					150	
Phe	Leu	Val	Ala	Glu	Leu	Lys	Asn	Asp	Ile	Glu	Ser	Lys	Ser	Leu	
				155					160					165	
Val	Leu	Lys	Gly	Cys	Ser	Asn	Val	Ser	Asn	Ala	Thr	Cys	Gln	Phe	
				170					175					180	
Leu	Ser	Gly	Glu	Asn	Lys	Thr	Leu	Gly	Gly	Val	Ile	Phe	Arg	Lys	
				185					190					195	
Phe	Glu	Cys	Ala	Asn	Val	Asn	Ser	Leu	Thr	Pro	Thr	Ser	Ala	Pro	
				200					205					210	
Thr	Thr	Ser	His	Asn	Val	Gly	Ser	Lys	Ala	Ser	Leu	Tyr	Leu	Leu	
				215					220					225	
Ala	Leu	Ala	Ser	Leu	Leu	Leu	Arg	Gly	Leu	Leu	Pro				
				230					235						

<210> 296

<211> 1245

<212> DNA

<213> Homo sapiens

<400> 296

ggcctcggtt caaacgaccc ggtgggtcta cagcgggaagg gagggagcga 50

aggtaggagg cagggcttgc ctactggcc accctcccaa cccaagagc 100

ccagcccat ggtccccgcc gccggcgcg tgctgtgggt cctgctgctg 150

aatctgggtc cccgggcggc gggggcccaa ggctgaccc agactccgac 200
cgaaatgcag cgggtcagtt tacgctttgg gggcccatg acccgagct 250
accggagcac cgcccgact ggtcttcccc ggaagacaag gataatccta 300
gaggacgaga atgatgccat ggccgacgcc gaccgcctgg ctggaccagc 350
ggctgccgag ctcttggccg ccacggtgtc caccggcttt agccggctgt 400
ccgccattaa cgaggaggat gggctctcag aagagggggg tgtgattaat 450
gccggaaagg atagcaccag cagagagctt ccagtgcca ctccaatac 500
agcggggagt tccagcacga ggtttatagc caatagtcag gagcctgaaa 550
tcaggctgac ttcaagcctg ccgcgctccc ccgggaggtc tactgaggac 600
ctgccaggct cgcaggccac cctgagccag tgggtccacac ctgggtctac 650
cccgagccgg tggccgtcac cctcaccac agccatgcca tctcctgagg 700
atctgctggct ggtgctgatg cctgggggcc cgtggcactg ccaactgcaag 750
tcgggcacca tgagccggag ccggtctggg aagctgcacg gcctttccgg 800
gcgcttcga gttggggcgc tgagccagct ccgcacggag cacaagcctt 850
gcacctatca acaatgtccc tgcaaccgac ttcgggaaga gtgccccctg 900
gacacaagtc tctgtactga caccaactgt gcctctcaga gcaccaccag 950
taccaggacc accactaccc ccttccccac catccacctc agaagcagtc 1000
ccagcctgcc acccgccagc cctgcccag ccctggcttt ttggaaacgg 1050
gtcaggattg gcctggagga tatttggaat agcctctctt cagtgttcac 1100
agagatgcaa ccaatagaca gaaaccagag gtaatggcca cttcatccac 1150
atgaggagat gtcagtatct caacctctct tgccttttca atcctagcac 1200
ccactagata tttttagtac agaaaaacaa aactggaaaa cacaa 1245

<210> 297

<211> 341

<212> PRT

<213> Homo sapiens

<400> 297

Met	Val	Pro	Ala	Ala	Gly	Ala	Leu	Leu	Trp	Val	Leu	Leu	Leu	Asn
1				5					10					15
Leu	Gly	Pro	Arg	Ala	Ala	Gly	Ala	Gln	Gly	Leu	Thr	Gln	Thr	Pro
				20					25					30
Thr	Glu	Met	Gln	Arg	Val	Ser	Leu	Arg	Phe	Gly	Gly	Pro	Met	Thr
				35					40					45
Arg	Ser	Tyr	Arg	Ser	Thr	Ala	Arg	Thr	Gly	Leu	Pro	Arg	Lys	Thr
				50					55					60
Arg	Ile	Ile	Leu	Glu	Asp	Glu	Asn	Asp	Ala	Met	Ala	Asp	Ala	Asp

65					70					75				
Arg	Leu	Ala	Gly	Pro	Ala	Ala	Ala	Glu	Leu	Leu	Ala	Ala	Thr	Val
				80					85					90
Ser	Thr	Gly	Phe	Ser	Arg	Ser	Ser	Ala	Ile	Asn	Glu	Glu	Asp	Gly
				95					100					105
Ser	Ser	Glu	Glu	Gly	Val	Val	Ile	Asn	Ala	Gly	Lys	Asp	Ser	Thr
				110					115					120
Ser	Arg	Glu	Leu	Pro	Ser	Ala	Thr	Pro	Asn	Thr	Ala	Gly	Ser	Ser
				125					130					135
Ser	Thr	Arg	Phe	Ile	Ala	Asn	Ser	Gln	Glu	Pro	Glu	Ile	Arg	Leu
				140					145					150
Thr	Ser	Ser	Leu	Pro	Arg	Ser	Pro	Gly	Arg	Ser	Thr	Glu	Asp	Leu
				155					160					165
Pro	Gly	Ser	Gln	Ala	Thr	Leu	Ser	Gln	Trp	Ser	Thr	Pro	Gly	Ser
				170					175					180
Thr	Pro	Ser	Arg	Trp	Pro	Ser	Pro	Ser	Pro	Thr	Ala	Met	Pro	Ser
				185					190					195
Pro	Glu	Asp	Leu	Arg	Leu	Val	Leu	Met	Pro	Trp	Gly	Pro	Trp	His
				200					205					210
Cys	His	Cys	Lys	Ser	Gly	Thr	Met	Ser	Arg	Ser	Arg	Ser	Gly	Lys
				215					220					225
Leu	His	Gly	Leu	Ser	Gly	Arg	Leu	Arg	Val	Gly	Ala	Leu	Ser	Gln
				230					235					240
Leu	Arg	Thr	Glu	His	Lys	Pro	Cys	Thr	Tyr	Gln	Gln	Cys	Pro	Cys
				245					250					255
Asn	Arg	Leu	Arg	Glu	Glu	Cys	Pro	Leu	Asp	Thr	Ser	Leu	Cys	Thr
				260					265					270
Asp	Thr	Asn	Cys	Ala	Ser	Gln	Ser	Thr	Thr	Ser	Thr	Arg	Thr	Thr
				275					280					285
Thr	Thr	Pro	Phe	Pro	Thr	Ile	His	Leu	Arg	Ser	Ser	Pro	Ser	Leu
				290					295					300
Pro	Pro	Ala	Ser	Pro	Cys	Pro	Ala	Leu	Ala	Phe	Trp	Lys	Arg	Val
				305					310					315
Arg	Ile	Gly	Leu	Glu	Asp	Ile	Trp	Asn	Ser	Leu	Ser	Ser	Val	Phe
				320					325					330
Thr	Glu	Met	Gln	Pro	Ile	Asp	Arg	Asn	Gln	Arg				
				335					340					

<210> 298

<211> 2692

<212> DNA

<213> Homo sapiens

<400> 298

cccgggtcga cccacgcgtc cggggagaaa ggatggccgg cctggcgcg 50

cggttggtcc tgctagctgg ggcagcggcg ctggcgagcg gctcccaggg 100
 cgaccgtgag ccggtgtacc gcgactgcgt actgcagtgc gaagagcaga 150
 actgctctgg gggcgctctg aatcacttcc gctcccgcca gccaatctac 200
 atgagtctag caggctggac ctgtcgggac gactgtaagt atgagtgtat 250
 gtgggtcacc gttgggctct acctccagga aggtcacaaa gtgcctcagt 300
 tccatggcaa gtggcccttc tcccggttcc tgttctttca agagccggca 350
 tcggccgtgg cctcgtttct caatggcctg gccagcctgg tgatgctctg 400
 ccgtaccgc accttcgtgc cagcctctc ccccatgtac cacacctgtg 450
 tggccttcgc ctgggtgtcc ctcaatgcat ggttctggtc cacagtcttc 500
 cacaccaggg acactgacct cacagagaaa atggactact tctgtgcctc 550
 cactgtcatc ctacactcaa tctacctgtg ctgcgtcagg accgtggggc 600
 tgcagcacc agctgtggtc agtgccttcc gggctctcct gctgtcatg 650
 ctgaccgtgc acgtctccta cctgagcctc atccgcttcg actatggcta 700
 caacctggtg gccaacgtgg ctattggcct ggtcaacgtg gtgtggtggc 750
 tggcctggtg cctgtggaac cagcggcggc tgccctcacgt gcgcaagtgc 800
 gtggtggtgg tcttgctgct gcaggggctg tccctgctcg agctgcttga 850
 ctcccaccg ctcttctggg tcttgatgc ccatgccatc tggcacatca 900
 gcaccatccc tgtccacgtc ctctttttca gctttctgga agatgacagc 950
 ctgtacctgc tgaaggaatc agaggacaag ttcaagctgg actgaagacc 1000
 ttggagcgag tctgccccag tggggatcct gccccgccc tgctggcctc 1050
 ccttctcccc tcaacccttg agatgatttt ctcttttcaa cttcttgaac 1100
 ttggacatga aggatgtggg ccagaatca tgtggccagc ccaccccctg 1150
 ttggccctca ccagccttg agtctgttct agggaaaggc tcccagcatc 1200
 tgggactcga gagtgggag cccctctacc tcttgagct gaactggggt 1250
 ggaactgagt gtgttcttag ctctaccggg aggacagctg cctgtttcct 1300
 ccccaccagc ctctcccca catcccagc tgccctggctg ggtcctgaag 1350
 ccctctgtct acctgggaga ccagggaacca caggccttag ggatacaggg 1400
 ggtccccttc tgttaccacc ccccaccctc ctccaggaca cactaggtg 1450
 gtgctggatg cttgttcttt ggccagccaa ggttcacggc gattctcccc 1500
 atgggatctt gagggaccaa gctgctggga ttgggaagga gtttcaccct 1550
 gaccgttgcc ctagccaggt tcccaggagg cctcaccata ctccccttca 1600
 gggccagggc tccagcaagc ccagggaag gatcctgtgc tgctgtctgg 1650

ttgagagcct gccaccgtgt gtccggagtg tgggccaggc tgagtgcata 1700
 ggtgacaggg ccgtgagcat gggcctgggt gtgtgtgagc tcaggcctag 1750
 gtgcgcagtg tggagacggg tgttgtcggg gaagaggtgt ggcttcaaag 1800
 tgtgtgtgtg cagggggtgg gtgtgttagc gtgggttagg ggaacgtgtg 1850
 tgcgcgtgct ggtgggcatg tgagatgagt gactgccggt gaatgtgtcc 1900
 acagttgaga ggttggagca ggatgaggga atcctgtcac catcaataat 1950
 cacttggtga gcgccagctc tgcccaagac gccacctggg cggacagcca 2000
 ggagctctcc atggccaggc tgcctgtgtg catgttcctt gtctggtgcc 2050
 cctttgcccg cctcctgcaa acctcacagg gtccccacac aacagtgtcc 2100
 tccagaagca gcccctcgga ggcagaggaa ggaaaatggg gatggctggg 2150
 gctctctcca tcctcctttt ctccctgcct tcgcatggct ggccttcccc 2200
 tccaaaacct ccattcccct gctgccagcc cctttgccat agcctgattt 2250
 tggggaggag gaaggggcca tttgaggag aaggggagaa agcttatggc 2300
 tgggtctggt ttcttccctt ccagagggt cttactgttc cagggtggcc 2350
 ccagggcagg caggggccac actatgcctg tgccctggtg aaggtgaccc 2400
 ctgccattta ccagcagccc tggcatgttc ctgccccaca ggaatagaat 2450
 ggaggagct ccagaaactt tccatcccaa aggcagtctc cgtgggtgaa 2500
 gcagactgga ttttgcctt gccctgacc ccttgtccct ctttgaggga 2550
 ggggagctat gctaggactc caacctcagg gactcgggtg gcctgcgcta 2600
 gcttcttttg atactgaaaa cttttaaggt gggagggtgg caaggatgt 2650
 gcttaataaa tcaattccaa gcctcaaaaa aaaaaaaaaa aa 2692

<210> 299

<211> 320

<212> PRT

<213> Homo sapiens

<400> 299

Met	Ala	Gly	Leu	Ala	Ala	Arg	Leu	Val	Leu	Leu	Ala	Gly	Ala	Ala
1				5					10					15
Ala	Leu	Ala	Ser	Gly	Ser	Gln	Gly	Asp	Arg	Glu	Pro	Val	Tyr	Arg
			20					25						30
Asp	Cys	Val	Leu	Gln	Cys	Glu	Glu	Gln	Asn	Cys	Ser	Gly	Gly	Ala
			35					40						45
Leu	Asn	His	Phe	Arg	Ser	Arg	Gln	Pro	Ile	Tyr	Met	Ser	Leu	Ala
			50					55						60
Gly	Trp	Thr	Cys	Arg	Asp	Asp	Cys	Lys	Tyr	Glu	Cys	Met	Trp	Val
			65					70						75

Thr	Val	Gly	Leu	Tyr	Leu	Gln	Glu	Gly	His	Lys	Val	Pro	Gln	Phe	
				80					85					90	
His	Gly	Lys	Trp	Pro	Phe	Ser	Arg	Phe	Leu	Phe	Phe	Gln	Glu	Pro	
				95					100					105	
Ala	Ser	Ala	Val	Ala	Ser	Phe	Leu	Asn	Gly	Leu	Ala	Ser	Leu	Val	
				110					115					120	
Met	Leu	Cys	Arg	Tyr	Arg	Thr	Phe	Val	Pro	Ala	Ser	Ser	Pro	Met	
				125					130					135	
Tyr	His	Thr	Cys	Val	Ala	Phe	Ala	Trp	Val	Ser	Leu	Asn	Ala	Trp	
				140					145					150	
Phe	Trp	Ser	Thr	Val	Phe	His	Thr	Arg	Asp	Thr	Asp	Leu	Thr	Glu	
				155					160					165	
Lys	Met	Asp	Tyr	Phe	Cys	Ala	Ser	Thr	Val	Ile	Leu	His	Ser	Ile	
				170					175					180	
Tyr	Leu	Cys	Cys	Val	Arg	Thr	Val	Gly	Leu	Gln	His	Pro	Ala	Val	
				185					190					195	
Val	Ser	Ala	Phe	Arg	Ala	Leu	Leu	Leu	Leu	Met	Leu	Thr	Val	His	
				200					205					210	
Val	Ser	Tyr	Leu	Ser	Leu	Ile	Arg	Phe	Asp	Tyr	Gly	Tyr	Asn	Leu	
				215					220					225	
Val	Ala	Asn	Val	Ala	Ile	Gly	Leu	Val	Asn	Val	Val	Trp	Trp	Leu	
				230					235					240	
Ala	Trp	Cys	Leu	Trp	Asn	Gln	Arg	Arg	Leu	Pro	His	Val	Arg	Lys	
				245					250					255	
Cys	Val	Val	Val	Val	Leu	Leu	Leu	Gln	Gly	Leu	Ser	Leu	Leu	Glu	
				260					265					270	
Leu	Leu	Asp	Phe	Pro	Pro	Leu	Phe	Trp	Val	Leu	Asp	Ala	His	Ala	
				275					280					285	
Ile	Trp	His	Ile	Ser	Thr	Ile	Pro	Val	His	Val	Leu	Phe	Phe	Ser	
				290					295					300	
Phe	Leu	Glu	Asp	Asp	Ser	Leu	Tyr	Leu	Leu	Lys	Glu	Ser	Glu	Asp	
				305					310					315	
Lys	Phe	Lys	Leu	Asp											
				320											

<210> 300

<211> 1674

<212> DNA

<213> Homo sapiens

<400> 300

ggccgcctgg aattgtggga gttgtgtctg ccactcggct gccggaggcc 50

gaaggtccgt gactatggct cccagagcc tgccttcac taggatggct 100

cctctgggca tgctgcttgg gctgctgatg gccgcctgct tcaccttctg 150

cctcagtcacat cagaacctga aggagtttgc cctgaccaac ccagagaaga 200
 gcagcaccaa agaaacggag agaaaagaaa ccaaagcoga ggaggagctg 250
 gatgccgaag tcttgagggt gttccacccg acgcatgagt ggcaggccct 300
 tcagccaggg caggctgtcc ctgcaggatc ccacgtacgg ctgaatcttc 350
 agactgggga aagagaggca aaactccaat atgaggacaa gttccgaaat 400
 aatttgaaag gcaaaaggct ggatatcaac accaacacct acacatctca 450
 ggatctcaag agtgcactgg caaaattcaa ggagggggca gagatggaga 500
 gttcaaagga agacaaggca aggcaggctg aggtaaagcg gctcttccgc 550
 cccattgagg aactgaagaa agactttgat gagctgaatg ttgtcattga 600
 gactgacatg cagatcatgg tacggctgat caacaagtcc aatagttcca 650
 gctccagttt ggaagagaag attgctgcgc tctttgatct tgaatattat 700
 gtccatcaga tggacaatgc gcaggacctg ctttcctttg gtggtcttca 750
 agtggatgatc aatgggctga acagcacaga gcccctcgtg aaggagtatg 800
 ctgcgtttgt gctgggctg gccttttcca gcaaccccaa ggtccaggctg 850
 gaggccatcg aagggggagc cctgcagaag ctgctggtca tctggccac 900
 ggagcagccg ctactgcaa agaagaaggc cctgtttgca ctgtgctccc 950
 tgctgcgcca cttcccctat gccagcggc agttcctgaa gctcgggggg 1000
 ctgcaggctc tgaggacct ggtgcaggag aagggcacgg aggtgctcgc 1050
 cgtgcgcgtg gtcacactgc tctacgacct ggtaacggag aagatgttcg 1100
 ccgaggagga ggctgagctg acccaggaga tgtcccaga gaagctgcag 1150
 cagtatcgcc aggtacacct cctgccaggc ctgtgggaac agggctggtg 1200
 cgagatcacg gccacacctc tggcgtgcc cgagcatgat gccctgaga 1250
 aggtgctgca gacactgggc gtcctcctga ccacctgcc ggaccgtac 1300
 cgtcaggacc ccagctcgg caggacactg gccagcctgc aggtgagta 1350
 ccaggtgctg gccagcctgg agctgcagga tggtaggagc gagggctact 1400
 tccaggagct gctgggctct gtcaacagct tgctgaagga gctgagatga 1450
 ggccccacac caggactgga ctgggatgcc gctagtgagg ctgaggggtg 1500
 ccagcgtggg tgggcttctc aggcaggagg acatcttggc agtgctggct 1550
 tggccattaa atggaacacct gaaggccaaa aaaaaaaaaa aaaaaaaaaa 1600
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1650
 aaaaaaaaaa aaaaaaaaaa aaaa 1674

<210> 301

<211> 461
 <212> PRT
 <213> Homo sapiens

<400> 301

Met	Ala	Pro	Gln	Ser	Leu	Pro	Ser	Ser	Arg	Met	Ala	Pro	Leu	Gly	1	5	10	15
Met	Leu	Leu	Gly	Leu	Leu	Met	Ala	Ala	Cys	Phe	Thr	Phe	Cys	Leu	20	25	30	
Ser	His	Gln	Asn	Leu	Lys	Glu	Phe	Ala	Leu	Thr	Asn	Pro	Glu	Lys	35	40	45	
Ser	Ser	Thr	Lys	Glu	Thr	Glu	Arg	Lys	Glu	Thr	Lys	Ala	Glu	Glu	50	55	60	
Glu	Leu	Asp	Ala	Glu	Val	Leu	Glu	Val	Phe	His	Pro	Thr	His	Glu	65	70	75	
Trp	Gln	Ala	Leu	Gln	Pro	Gly	Gln	Ala	Val	Pro	Ala	Gly	Ser	His	80	85	90	
Val	Arg	Leu	Asn	Leu	Gln	Thr	Gly	Glu	Arg	Glu	Ala	Lys	Leu	Gln	95	100	105	
Tyr	Glu	Asp	Lys	Phe	Arg	Asn	Asn	Leu	Lys	Gly	Lys	Arg	Leu	Asp	110	115	120	
Ile	Asn	Thr	Asn	Thr	Tyr	Thr	Ser	Gln	Asp	Leu	Lys	Ser	Ala	Leu	125	130	135	
Ala	Lys	Phe	Lys	Glu	Gly	Ala	Glu	Met	Glu	Ser	Ser	Lys	Glu	Asp	140	145	150	
Lys	Ala	Arg	Gln	Ala	Glu	Val	Lys	Arg	Leu	Phe	Arg	Pro	Ile	Glu	155	160	165	
Glu	Leu	Lys	Lys	Asp	Phe	Asp	Glu	Leu	Asn	Val	Val	Ile	Glu	Thr	170	175	180	
Asp	Met	Gln	Ile	Met	Val	Arg	Leu	Ile	Asn	Lys	Phe	Asn	Ser	Ser	185	190	195	
Ser	Ser	Ser	Leu	Glu	Glu	Lys	Ile	Ala	Ala	Leu	Phe	Asp	Leu	Glu	200	205	210	
Tyr	Tyr	Val	His	Gln	Met	Asp	Asn	Ala	Gln	Asp	Leu	Leu	Ser	Phe	215	220	225	
Gly	Gly	Leu	Gln	Val	Val	Ile	Asn	Gly	Leu	Asn	Ser	Thr	Glu	Pro	230	235	240	
Leu	Val	Lys	Glu	Tyr	Ala	Ala	Phe	Val	Leu	Gly	Ala	Ala	Phe	Ser	245	250	255	
Ser	Asn	Pro	Lys	Val	Gln	Val	Glu	Ala	Ile	Glu	Gly	Gly	Ala	Leu	260	265	270	
Gln	Lys	Leu	Leu	Val	Ile	Leu	Ala	Thr	Glu	Gln	Pro	Leu	Thr	Ala	275	280	285	
Lys	Lys	Lys	Val	Leu	Phe	Ala	Leu	Cys	Ser	Leu	Leu	Arg	His	Phe				

	290	295	300
Pro Tyr Ala Gln Arg Gln Phe Leu Lys Leu Gly Gly Leu Gln Val	305	310	315
Leu Arg Thr Leu Val Gln Glu Lys Gly Thr Glu Val Leu Ala Val	320	325	330
Arg Val Val Thr Leu Leu Tyr Asp Leu Val Thr Glu Lys Met Phe	335	340	345
Ala Glu Glu Glu Ala Glu Leu Thr Gln Glu Met Ser Pro Glu Lys	350	355	360
Leu Gln Gln Tyr Arg Gln Val His Leu Leu Pro Gly Leu Trp Glu	365	370	375
Gln Gly Trp Cys Glu Ile Thr Ala His Leu Leu Ala Leu Pro Glu	380	385	390
His Asp Ala Arg Glu Lys Val Leu Gln Thr Leu Gly Val Leu Leu	395	400	405
Thr Thr Cys Arg Asp Arg Tyr Arg Gln Asp Pro Gln Leu Gly Arg	410	415	420
Thr Leu Ala Ser Leu Gln Ala Glu Tyr Gln Val Leu Ala Ser Leu	425	430	435
Glu Leu Gln Asp Gly Glu Asp Glu Gly Tyr Phe Gln Glu Leu Leu	440	445	450
Gly Ser Val Asn Ser Leu Leu Lys Glu Leu Arg	455	460	

<210> 302
 <211> 2136
 <212> DNA
 <213> Homo sapiens

<400> 302
 ttccggttcc gtagaggaag tggcgcgac cttcatttgg ggtttcgggt 50
 ccccccttc cccctcccg gggctctggg gtgacattgc accgcgcccc 100
 tcgtggggtc gcgttgccac ccacgcgga cccccagct ggcgcgcccc 150
 tcccatittgc ctgtcctggt caggccccca ccccccttc cacctgacca 200
 gccatggggg ctgcggtgtt ttccggtgc actttcgtcg cgttcggccc 250
 ggccttcgcg cttttcttga tcaactgtgc tggggaccg cttcgcgtta 300
 tcatcctggt cgcaggggca tttttctggc tggctccct gctcctggcc 350
 tctgtggtct ggttcattct ggtccatgtg accgaccggt cagatgccc 400
 gctccagtac ggctcctga tttttggtgc tgctgtctct gtccttctac 450
 aggaggtgtt ccgctttgcc tactacaagc tgcttaagaa ggcagatgaa 500
 gggttagcat cgctgagtga ggacggaaga tcacccatct ccatccgcca 550

gatggcctat gtttctggtc tctccttcgg tatcatcagt ggtgtcttct 600
ctgttatcaa tatcttggt gatgcacttg ggccaggtgt ggttgggatc 650
catggagact caccctatta ctctctgact tcagcctttc tgacagcagc 700
cattatcctg ctccatacct tttggggagt tgtgttcttt gatgcctgtg 750
agaggagacg gtactgggct ttgggcctgg tggttgggag tcacctactg 800
acatcgggac tgacattcct gaacccctgg tatgaggcca gcctgctgcc 850
catctatgca gtcaactgtt ccatggggct ctgggccttc atcacagctg 900
gagggtccct ccgaagtatt cagcgcagcc tcttgtgtaa ggactgacta 950
cctggactga tcgcctgaca gatccacct gcctgtccac tgcccatgac 1000
tgagcccage cccagcccg gtccattgcc cacattctct gtctccttct 1050
cgtcggtcta cccactacc tccagggttt tgctttgtcc ttttgtgacc 1100
gttagtctct aagctttacc aggagcagcc tgggttcagc cagtcaagtga 1150
ctggtgggtt tgaatctgca cttatcccca ccacctgggg acccccttgt 1200
tgtgtccagg actccccctg tgtcagtgt ctgctctcac cctgcccag 1250
actcacctcc ctccccctct gcaggccgac ggcaggagga cagtccgggtg 1300
atggtgtatt ctgccctgcg catcccaccc gaggactgag ggaacctagg 1350
ggggaccctt gggcctgggg tgccctcctg atgtcctcgc cctgtatttc 1400
tccatctcca gttctggaca gtgcaggttg ccaagaaaag ggacctagtt 1450
tagccattgc cctggagatg aaattaatgg aggtcaagg atagatgagc 1500
tctgagtttc tcagtactcc ctcaagactg gacatcttgg tctttttctc 1550
aggcctgagg gggaaccatt tttggtgtga taaataacct aaactgcctt 1600
ttttctttt ttgaggtggg gggagggagg aggtatattg gaactcttct 1650
aacctccttg ggctatatct tctctcctcg agttgctcct catggctggg 1700
ctcatttcgg tccctttctc cttggtccca gacctgggg gaaaggaagg 1750
aagtgcattg ttgggaactg gcattactgg aactaatggt tttaacctcc 1800
ttaaccacca gcatccctcc tctccccaag gtgaagtgga gggtgctgtg 1850
gtgagctggc cactccagag ctgcagtgcc actggaggag tcagactacc 1900
atgacatcgt agggaaggag gggagatttt tttgtagttt ttaattgggg 1950
tgtgggaggg gcggggaggt tttctataaa ctgtatcatt ttctgctgag 2000
ggtggagtgt cccatccttt taatcaaggt gattgtgatt ttgactaata 2050
aaaaagaatt tgtaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2100
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 2136

<210> 303
 <211> 247
 <212> PRT
 <213> Homo sapiens

<400> 303

Met	Gly	Ala	Ala	Val	Phe	Phe	Gly	Cys	Thr	Phe	Val	Ala	Phe	Gly	1	5	10	15
Pro	Ala	Phe	Ala	Leu	Phe	Leu	Ile	Thr	Val	Ala	Gly	Asp	Pro	Leu	20	25	30	
Arg	Val	Ile	Ile	Leu	Val	Ala	Gly	Ala	Phe	Phe	Trp	Leu	Val	Ser	35	40	45	
Leu	Leu	Leu	Ala	Ser	Val	Val	Trp	Phe	Ile	Leu	Val	His	Val	Thr	50	55	60	
Asp	Arg	Ser	Asp	Ala	Arg	Leu	Gln	Tyr	Gly	Leu	Leu	Ile	Phe	Gly	65	70	75	
Ala	Ala	Val	Ser	Val	Leu	Leu	Gln	Glu	Val	Phe	Arg	Phe	Ala	Tyr	80	85	90	
Tyr	Lys	Leu	Leu	Lys	Lys	Ala	Asp	Glu	Gly	Leu	Ala	Ser	Leu	Ser	95	100	105	
Glu	Asp	Gly	Arg	Ser	Pro	Ile	Ser	Ile	Arg	Gln	Met	Ala	Tyr	Val	110	115	120	
Ser	Gly	Leu	Ser	Phe	Gly	Ile	Ile	Ser	Gly	Val	Phe	Ser	Val	Ile	125	130	135	
Asn	Ile	Leu	Ala	Asp	Ala	Leu	Gly	Pro	Gly	Val	Val	Gly	Ile	His	140	145	150	
Gly	Asp	Ser	Pro	Tyr	Tyr	Phe	Leu	Thr	Ser	Ala	Phe	Leu	Thr	Ala	155	160	165	
Ala	Ile	Ile	Leu	Leu	His	Thr	Phe	Trp	Gly	Val	Val	Phe	Phe	Asp	170	175	180	
Ala	Cys	Glu	Arg	Arg	Arg	Tyr	Trp	Ala	Leu	Gly	Leu	Val	Val	Gly	185	190	195	
Ser	His	Leu	Leu	Thr	Ser	Gly	Leu	Thr	Phe	Leu	Asn	Pro	Trp	Tyr	200	205	210	
Glu	Ala	Ser	Leu	Leu	Pro	Ile	Tyr	Ala	Val	Thr	Val	Ser	Met	Gly	215	220	225	
Leu	Trp	Ala	Phe	Ile	Thr	Ala	Gly	Gly	Ser	Leu	Arg	Ser	Ile	Gln	230	235	240	
Arg	Ser	Leu	Leu	Cys	Lys	Asp	245											

<210> 304
 <211> 240
 <212> DNA
 <213> Homo sapiens

<220>

<221> unsure
<222> 108, 123, 126, 154, 198, 206, 217
<223> unknown base

<400> 304
aagctggttt aaggaagcag aggagggtta gattcgttga gtgaggacgg 50
aagatcaacc catttccatt ccgccagatg gcctatgttt ctggtctctc 100
ccttcggnat catcagtggg gnttntctg ttatcaatat tttggctgat 150
gcanttgggc caggtgtggg tgggatccat ggagactcac cctattantt 200
cctganttca gccttntga cagcagccat tatcctgctc 240

<210> 305
<211> 378
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 58, 94, 132, 186, 191, 220, 240, 248, 280, 311, 332
<223> unknown base

<400> 305
gaccgaccgt tcagatgccg ggttcagta cggcttcctg atttttggtg 50
ctgctgtntc tgtccttcta caggagggtg tccgctttgc ctantacaag 100
ctgcttaaga aggcagatga ggggttagca tngctgagtg aggacggaag 150
atcacccatt tccatccgcc agatggccta tgttnttggg ntttccttcg 200
gtatcatcag tgggtgtttt tctgttatca atattttggg tgatgcantt 250
gggccagggtg tgggtgggat ccatggagan tcacctatt aattcctgaa 300
ttcagccttt ntgacagcag ccattatcct gntccatacc ttttggggag 350
ttgtgttttt tgatgcctgt gagaggag 378

<210> 306
<211> 655
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 1, 22, 129, 133, 184
<223> unknown base

<400> 306
ngttggagaa gtggcgcgga cnttcatttg gggtttcggt ttccccctt 50
tccctttccc cggggtcttg ggtgacattg cacgggcccc tcgtggggtc 100
gcgttgccac cccaacgcca cccccagnt gngcgccct tccatttgc 150
ctgtcctggg caggccccca ccccccttc cacntgacca gccatggggg 200
ctgcggtgtt tttcggctgc actttcgtcg cgttcggccc ggccttcgag 250

cttttcttga tcaactgtggc tggggacccg cttcgcgtta tcatectggt 300
 cgcaggggca tttttctggc tgggtctccct gctcctggcc tctgtggtct 350
 ggttcatctt ggtccatgtg accgaccggt cagatgcccg gctccagtac 400
 ggcctcctga tttttggtgc tgctgtctct gtccttctac aggaggtgtt 450
 ccgctttgcc tactacaagc tgcttaagaa ggcagatgag gggttagcat 500
 cgctgagtga ggacggaaga taccatctt ccatccgcca gatggcctat 550
 gtttctggtc tctccttcgg tatcatcagt ggtgtcttct ctgttatcaa 600
 tattttggct gatgcacttg gggcaggtgt ggttgggatc catggagact 650
 ccccc 655

<210> 307
 <211> 650
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 52, 89, 128
 <223> unknown base

<400> 307
 gtaaaagaaa gtggccggac cttcattggg gtttcgggtc ccccccttcc 50
 cnttccccgg ggtctggggg tgacattgca ccgcgccct cgtgggggtcg 100
 cgttgccacc ccaocgggac tccccagntg gcgcgccct cccatttgcc 150
 tgtcctggtc agggccccac cccccctccc acctgaccag ccatgggggc 200
 tgcggtgttt ttcgggctgc actttcgtcg cgttcggggc cggccttcgc 250
 gcttttcttg atcaactgtg ctggggaccc gcttcgcgtt atcatcctgg 300
 tcgcaggggc atttttctgg ctgggtctcc tgctcctggc ctctgtggtc 350
 tggttcatct tggatcatgt gaccgaccgg tcagatgcc ggctccagta 400
 cggcctcctg atttttggtg ctgctgtctc tgccttcta caggaggtgt 450
 tccgctttgc ctactacaag ctgcttaaga aggcagatga ggggttagca 500
 tcgctgagtg aggacggaag atcaccatc tccatccgcc agatggccta 550
 tgtttctggt ctctccttcg gtatcatcag tgggtgtctc tctgttatca 600
 atattttggc tgatgcactt gggccaggtg tggttgggat ccatggagac 650

<210> 308
 <211> 1570
 <212> DNA
 <213> Homo sapiens

<400> 308
 gccccaggga gcagtgggtg gttataactc agggccggtg cccagagccc 50

aggaggaggc agtggccagg aaggcacagg cctgagaagt ctgaggctga 100
 gctgggagca aatccccac cccctacctg ggggacaggg caagtgagac 150
 ctggtgaggg tggctcagca ggcagggaag gagaggtgtc tgtgcgtcct 200
 gcaccacat ctttctctgt cccctccttg ccctgtctgg aggctgctag 250
 actcctatct tctgaattct atagtgcctg ggtctcagcg cagtgccgat 300
 ggtggcccgt ccttgtggtt cctctctacc tggggaaata aggtgcagcg 350
 gccatggcta cagcaagacc cccctggatg tgggtgctct gtgctctgat 400
 cacagccttg cttctggggg tcacagagca tgttctcgcc aacaatgatg 450
 tttcctgtga ccaccctct aacaccgtgc cctctgggag caaccaggac 500
 ctgggagctg gggccgggga agacgcccgg tcggatgaca gcagcagccg 550
 catcatcaat ggatccgact gcgatatgca caccagccg tggcaggccg 600
 cgctgttgct aaggcccaac cagctctact gggggcggt gttggtgcat 650
 ccacagtggc tgctcacggc cgcccactgc aggaagaaag ttttcagagt 700
 ccgtctcggc cactactccc tgtcaccagt ttatgaatct gggcagcaga 750
 tgttcagggg ggtcaaatcc atccccacc ctggctactc ccaccctggc 800
 cactctaacg acctcatgct catcaaactg aacagaagaa ttcgtccac 850
 taaagatgtc agaccatca acgtctctc tcattgtccc tctgctggga 900
 caaagtgtt ggtgtctggc tgggggacaa ccaagagccc ccaagtgcac 950
 ttcctaagg tcctccagt cttgaatata agcgtgctaa gtcagaaaag 1000
 gtgcgaggat gcttaccga gacagataga tgacaccatg ttctgcgccg 1050
 gtgacaaagc aggtagagac tcctgccagg gtgattctgg ggggcctgtg 1100
 gtctgcaatg gctccctgca gggactcgtg tcctggggag attacccttg 1150
 tgcccgccc aacagaccgg gtgtctacac gaacctctgc aagttacca 1200
 agtggatcca ggaaaccatc caggccaact cctgagtcac ccaggactc 1250
 agcacaccgg catccccacc tgctgcaggg acagccctga cactccttc 1300
 agaccctcat tccttcccag agatgttgag aatgttcac tctccagccc 1350
 ctgaccccat gtctcctgga ctgagggtct gcttccccca cattgggctg 1400
 accgtgtctc tctagttgaa ccctgggaac aatttccaaa actgtccagg 1450
 gcgggggttg cgtctcaatc tcctggggc actttcatcc tcaagctcag 1500
 ggcccatccc ttctctgcag ctctgaccca aatttagtcc cagaaataaa 1550
 ctgagaagtg gaaaaaaaaa 1570

<210> 309

<211> 293
 <212> PRT
 <213> Homo sapiens

<400> 309

Met	Ala	Thr	Ala	Arg	Pro	Pro	Trp	Met	Trp	Val	Leu	Cys	Ala	Leu
1				5					10					15
Ile	Thr	Ala	Leu	Leu	Leu	Gly	Val	Thr	Glu	His	Val	Leu	Ala	Asn
				20					25					30
Asn	Asp	Val	Ser	Cys	Asp	His	Pro	Ser	Asn	Thr	Val	Pro	Ser	Gly
				35					40					45
Ser	Asn	Gln	Asp	Leu	Gly	Ala	Gly	Ala	Gly	Glu	Asp	Ala	Arg	Ser
				50					55					60
Asp	Asp	Ser	Ser	Ser	Arg	Ile	Ile	Asn	Gly	Ser	Asp	Cys	Asp	Met
				65					70					75
His	Thr	Gln	Pro	Trp	Gln	Ala	Ala	Leu	Leu	Leu	Arg	Pro	Asn	Gln
				80					85					90
Leu	Tyr	Cys	Gly	Ala	Val	Leu	Val	His	Pro	Gln	Trp	Leu	Leu	Thr
				95					100					105
Ala	Ala	His	Cys	Arg	Lys	Lys	Val	Phe	Arg	Val	Arg	Leu	Gly	His
				110					115					120
Tyr	Ser	Leu	Ser	Pro	Val	Tyr	Glu	Ser	Gly	Gln	Gln	Met	Phe	Gln
				125					130					135
Gly	Val	Lys	Ser	Ile	Pro	His	Pro	Gly	Tyr	Ser	His	Pro	Gly	His
				140					145					150
Ser	Asn	Asp	Leu	Met	Leu	Ile	Lys	Leu	Asn	Arg	Arg	Ile	Arg	Pro
				155					160					165
Thr	Lys	Asp	Val	Arg	Pro	Ile	Asn	Val	Ser	Ser	His	Cys	Pro	Ser
				170					175					180
Ala	Gly	Thr	Lys	Cys	Leu	Val	Ser	Gly	Trp	Gly	Thr	Thr	Lys	Ser
				185					190					195
Pro	Gln	Val	His	Phe	Pro	Lys	Val	Leu	Gln	Cys	Leu	Asn	Ile	Ser
				200					205					210
Val	Leu	Ser	Gln	Lys	Arg	Cys	Glu	Asp	Ala	Tyr	Pro	Arg	Gln	Ile
				215					220					225
Asp	Asp	Thr	Met	Phe	Cys	Ala	Gly	Asp	Lys	Ala	Gly	Arg	Asp	Ser
				230					235					240
Cys	Gln	Gly	Asp	Ser	Gly	Gly	Pro	Val	Val	Cys	Asn	Gly	Ser	Leu
				245					250					255
Gln	Gly	Leu	Val	Ser	Trp	Gly	Asp	Tyr	Pro	Cys	Ala	Arg	Pro	Asn
				260					265					270
Arg	Pro	Gly	Val	Tyr	Thr	Asn	Leu	Cys	Lys	Phe	Thr	Lys	Trp	Ile
				275					280					285
Gln	Glu	Thr	Ile	Gln	Ala	Asn	Ser							

<210> 310
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 310
 tcctgtgacc acccctctaa cacc 24

<210> 311
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 311
 ctggaacatc tgctgcccag attc 24

<210> 312
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 312
 gtcgcatgac agcagcagcc gcatcatcaa tggatccgac tgcgatatgc 50

<210> 313
 <211> 3010
 <212> DNA
 <213> Homo sapiens

<400> 313
 atggtcaacg accggtggaa gaccatgggc ggcgctgcc aacttgagga 50
 ccggccgcgc gacaagccgc agcggccgag ctgcggttac gtgctgtgca 100
 ccgtgctgct ggccctggct gtgctgctgg ctgtagctgt caccggtgcc 150
 gtgctcttcc tgaaccacgc ccacgcgccg ggcacggcgc cccacctgt 200
 cgtcagcact ggggctgcca gcgccaacag cgccctggtc actgtggaaa 250
 gggcggacag ctgcacctc agcatcctca ttgaccggcg ctgccccgac 300
 ctcaccgaca gcttcgcacg cctggagagc gccaggcct cgggtgctgca 350
 ggcgctgaca gagcaccagg ccagccacg gctggtgggc gaccaggagc 400
 aggagctgct ggacacgctg gccgaccagc tgccccggct gctggccgca 450
 gcctcagagc tgcagacgga gtgcatgggg ctgcggaagg ggcattggcac 500
 gctgggccag ggcctcagcg ccctgcagag tgagcagggc cgcctcatcc 550

agcttctctc tgagagccag ggcacatgg ctcacctggt gaactccgtc 600
 agcgacatcc tggatgccct gcagaggac cgggggctgg gccggccccg 650
 caacaaggcc gaccttcaga gagcgctgc cgggggaacc cggccccggg 700
 gctgtgccac tggctcccg ccccgagact gtctggacgt cctcctaagc 750
 ggacagcagg acgatggcgt ctactctgtc tttcccaccc actacccggc 800
 cggcttccag gtgtactgtg acatgcgcac ggacggcggc ggctggacgg 850
 tgtttcagcg cggggaggac ggctccgtga acttcttccg gggctgggac 900
 gcgtaccgag acggcttttg caggctcacc ggggagcact ggctagggct 950
 caagaggatc cacgccctga ccacacaggc tgcctacgag ctgcacgtgg 1000
 acctggagga ctttgagaat ggacggcct atgcccgtc cgggagcttc 1050
 ggcgtgggct tgttctccgt ggacctgag gaagacgggt acccgctcac 1100
 cgtggctgac tattccggca ctgcaggcga ctccctcctg aagcacagcg 1150
 gcatgagggt caccaccaag gacctgaca gcgaccattc agagaacaac 1200
 tgtgccgcct tctaccgcg tgccctggtg taccgcaact gccacacgtc 1250
 caacctcaat gggcagtacc tgcgcggtgc gcacgcctcc tatgccgacg 1300
 gcgtggagtg gtcctcctgg accggctggc agtactcact caagttctct 1350
 gagatgaaga tccggccggt ccgggaggac cgctagactg gtgcaccttg 1400
 tccttgccc tgctggtccc tgctgcccc tccccgacc cacctcactc 1450
 tttcgtgaat gttctccacc cacctgtgcc tggcggaccc actctccagt 1500
 agggaggggc cgggccatcc ctgacacgaa gctccctggg ccggtgaagt 1550
 cacacatcgc cttctgcgg tccccacccc ctccatttg cagctcactg 1600
 atctcttgcc tctgctgatg ggggctggca aacttgacga cccaactcc 1650
 tgccctgccc cactgtgact ccggtgctgt ttgccgtccc ctggccagga 1700
 tgggtggagt tgccccagg accctctgcc ctgcccggcc aaatacccg 1750
 cattatgggg acagagagca gggggcagac agcaccctg gagtctcct 1800
 agcagatcgt ggggaatgtc aggtctctct gaggtcaggt ctgaggccag 1850
 tatcctccag ccctcccaat gccaaccccc acccgtttc cctggtgccc 1900
 agagaacca cctctcccc aagggcctca gctggctgt gggctgggtg 1950
 gccccatcct accaggccct gaggtcagga tggggagctg ctgccttttg 2000
 ggaccacgc tccaaggctg agaccagttc cctggaggcc acccaccctg 2050
 tgccccggca ggcctggggt ctgcagtcct cttacctgct gtgcccacct 2100
 gctctctgtc tcaaagtagg cccaacccat cccccacca gctcccgcc 2150

gtcctcctac ctggggcagc cggggctgcc atcccatttc tctgcctct 2200
 ggaagggtggg tggggccctg caccgtgggg ctggactgcg ctaatgggaa 2250
 gctcttggtt ttctgggctg gggcctaggc agggctggga tgaggcttgt 2300
 acaaccccca ccaccaattt ccaggaggact ccagggtcct gaggcctccc 2350
 aggagggcct tgggggtgat gacccttcc ctgagggtggc tgtctccatg 2400
 aggaggccaa cccttgccat tgaccgtggc cacctggacc caggccaggc 2450
 ccggcccggc gagtgggtcaa gggacaggga ccacctcacc gggcaaattg 2500
 ggtcgggggg actggggcac cagaccaggc accacctgga cactttcttg 2550
 ttgaatcctc ccaacaccca gcacgtgtc atccccactc cttgtgtgca 2600
 cacatgcaga ggtgagaccc gcaggctccc aggaccagca gccacaaggg 2650
 cagggtctga gccgggtcct cagctgtctg ctcagcagcc ctggaccgcg 2700
 gtgcgttacg tcaggcccag atgcaggcg gcttttccaa ggcctcctga 2750
 tgggggcctc cgaaagggtt ggagtcagcc ttggggagct gcctagcagc 2800
 ctctcctcgg gcaggagggg aggtggcttc ctccaaagga caccgatgg 2850
 cagggtgccta gggggtgtgg ggttccgttc tcccttcccc tccactgaa 2900
 gtttgtgctt aaaaaacaat aaatttgact tggcaccact gggggttggt 2950
 gggagaggcc gtgtgacctg gctctctgtc ccagtgccac caggtcatcc 3000
 acatgcgcag 3010

<210> 314

<211> 461

<212> PRT

<213> Homo sapiens

<400> 314

Met	Val	Asn	Asp	Arg	Trp	Lys	Thr	Met	Gly	Gly	Ala	Ala	Gln	Leu
1				5					10					15
Glu	Asp	Arg	Pro	Arg	Asp	Lys	Pro	Gln	Arg	Pro	Ser	Cys	Gly	Tyr
				20					25					30
Val	Leu	Cys	Thr	Val	Leu	Leu	Ala	Leu	Ala	Val	Leu	Leu	Ala	Val
				35					40					45
Ala	Val	Thr	Gly	Ala	Val	Leu	Phe	Leu	Asn	His	Ala	His	Ala	Pro
				50					55					60
Gly	Thr	Ala	Pro	Pro	Pro	Val	Val	Ser	Thr	Gly	Ala	Ala	Ser	Ala
				65					70					75
Asn	Ser	Ala	Leu	Val	Thr	Val	Glu	Arg	Ala	Asp	Ser	Ser	His	Leu
				80					85					90
Ser	Ile	Leu	Ile	Asp	Pro	Arg	Cys	Pro	Asp	Leu	Thr	Asp	Ser	Phe
				95					100					105

Ala Arg Leu Glu Ser	Ala Gln Ala Ser	Val Leu Gln Ala Leu Thr	110	115	120
Glu His Gln Ala Gln	Pro Arg Leu Val	Gly Asp Gln Glu Gln Glu	125	130	135
Leu Leu Asp Thr Leu	Ala Asp Gln Leu	Pro Arg Leu Leu Ala Arg	140	145	150
Ala Ser Glu Leu Gln	Thr Glu Cys Met	Gly Leu Arg Lys Gly His	155	160	165
Gly Thr Leu Gly Gln	Gly Leu Ser Ala	Leu Gln Ser Glu Gln Gly	170	175	180
Arg Leu Ile Gln Leu	Leu Ser Glu Ser	Gln Gly His Met Ala His	185	190	195
Leu Val Asn Ser Val	Ser Asp Ile Leu	Asp Ala Leu Gln Arg Asp	200	205	210
Arg Gly Leu Gly Arg	Pro Arg Asn Lys	Ala Asp Leu Gln Arg Ala	215	220	225
Pro Ala Arg Gly Thr	Arg Pro Arg Gly	Cys Ala Thr Gly Ser Arg	230	235	240
Pro Arg Asp Cys Leu	Asp Val Leu Leu	Ser Gly Gln Gln Asp Asp	245	250	255
Gly Val Tyr Ser Val	Phe Pro Thr His	Tyr Pro Ala Gly Phe Gln	260	265	270
Val Tyr Cys Asp Met	Arg Thr Asp Gly	Gly Gly Trp Thr Val Phe	275	280	285
Gln Arg Arg Glu Asp	Gly Ser Val Asn	Phe Phe Arg Gly Trp Asp	290	295	300
Ala Tyr Arg Asp Gly	Phe Gly Arg Leu	Thr Gly Glu His Trp Leu	305	310	315
Gly Leu Lys Arg Ile	His Ala Leu Thr	Thr Gln Ala Ala Tyr Glu	320	325	330
Leu His Val Asp Leu	Glu Asp Phe Glu	Asn Gly Thr Ala Tyr Ala	335	340	345
Arg Tyr Gly Ser Phe	Gly Val Gly Leu	Phe Ser Val Asp Pro Glu	350	355	360
Glu Asp Gly Tyr Pro	Leu Thr Val Ala	Asp Tyr Ser Gly Thr Ala	365	370	375
Gly Asp Ser Leu Leu	Lys His Ser Gly	Met Arg Phe Thr Thr Lys	380	385	390
Asp Arg Asp Ser Asp	His Ser Glu Asn	Asn Cys Ala Ala Phe Tyr	395	400	405
Arg Gly Ala Trp Trp	Tyr Arg Asn Cys	His Thr Ser Asn Leu Asn	410	415	420

Gly Gln Tyr Leu Arg Gly Ala His Ala Ser Tyr Ala Asp Gly Val
425 430 435

Glu Trp Ser Ser Trp Thr Gly Trp Gln Tyr Ser Leu Lys Phe Ser
440 445 450

Glu Met Lys Ile Arg Pro Val Arg Glu Asp Arg
455 460

<210> 315

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 315

cacacgtcca acctcaatgg gcag 24

<210> 316

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 316

gaccagcagg gccaaaggaca agg 23

<210> 317

<211> 44

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 317

gttctctgag atgaagatcc ggccggtccg ggagtaccgc ttag 44

<210> 318

<211> 1841

<212> DNA

<213> Homo sapiens

<400> 318

gcagtcagag acttcccctg cccctcgctg ggaaagaaca ttaggaatgc 50

cttttagtgc cttgcttctt gaactagctc acagtagccc ggcgggcccag 100

ggcaatccga ccacatttca ctctcaccgc tgtaggaatc cagatgcagg 150

ccaagtacag cagcacgagg gacatgctgg atgatgatgg ggacaccacc 200

atgagcctgc attctcaagc ctctgccaca actcggcatc cagagccccg 250

gcgcacagag cacagggtc cctcttcaac gtggcgacca gtggccctga 300

ccctgctgac tttgtgcttg gtgctgctga tagggctggc agccctgggg 350

cttttgtttt ttcagtacta ccagctctcc aatactggtc aagacaccat 400

ttctcaaatg gaagaaagat taggaaatac gtcccaagag ttgcaatctc 450
 ttcaagtcca gaatataaag cttgcaggaa gtctgcagca tgtggctgaa 500
 aaactctgtc gtgagctgta taacaaagct ggagcacaca ggtgcagccc 550
 ttgtacagaa caatggaaat ggcatggaga caattgctac cagttctata 600
 aagacagcaa aagttgggag gactgtaa atttctgcct tagtgaaaac 650
 tctaccatgc tgaagataaa caaacaagaa gacctggaat ttgccgcgtc 700
 tcagagctac tctgagtttt tctactctta ttggacaggg cttttgcgcc 750
 ctgacagtgg caaggcctgg ctgtggatgg atggaacccc tttcacttct 800
 gaactgttcc atattataat agatgtcacc agcccaagaa gcagagactg 850
 tgtggccatc ctcaatggga tgatcttctc aaaggactgc aaagaattga 900
 agcgttgtgt ctgtgagaga agggcaggaa tggatgaagcc agagagcctc 950
 catgtccccc ctgaaacatt aggcgaaggt gactgattcg ccctctgcaa 1000
 ctacaaatag cagagtgagc caggcgggtgc caaagcaagg gctagttgag 1050
 acattgggaa atggaacata atcaggaaa actatctctc tgactagtac 1100
 aaaatgggtt ctctgttttc ctgttcagga tcaccagcat ttctgagctt 1150
 gggtttatgc acgtatttaa cagtcacaag aagtcttatt tacatgccac 1200
 caaccaacct cagaaacca taatgtcatc tgccctcttg gcttagagat 1250
 aacttttagc tctctttctt ctcaatgtct aatatcaact ccctgttttc 1300
 atgtcttcct tacacttggg ggaataagaa actttttgaa gtagaggaaa 1350
 tacattgagg taacatcctt ttctctgaca gtcaagtagt ccatcagaaa 1400
 ttggcagtca cttccagat tgtaccagca aatacacaag gaattctttt 1450
 tgtttgtttc agttcatact agtcccttcc caatccatca gtaaagaccc 1500
 catctgcctt gtccatgccg tttcccaaca gggatgtcac ttgatatgag 1550
 aatctcaa at ctcaatgcct tataagcatt ccttctgtg tccattaaga 1600
 ctctgataat tgtctccctt ccataggaat ttctcccagg aaagaaatat 1650
 atcccatct ccgtttcata tcagaactac ogccccgat attcccttca 1700
 gagagattaa agaccagaaa aaagtgaagc tcttcatctg cacctgtaat 1750
 agtttcagtt cctatcttct tccattgacc catatttata cttttcaggt 1800
 actgaagatt taataataat aaatgtaaat actgtgaaaa a 1841

<210> 319

<211> 280

<212> PRT

<213> Homo sapiens

<400> 319

Met	Gln	Ala	Lys	Tyr	Ser	Ser	Thr	Arg	Asp	Met	Leu	Asp	Asp	Asp
1				5					10					15
Gly	Asp	Thr	Thr	Met	Ser	Leu	His	Ser	Gln	Ala	Ser	Ala	Thr	Thr
				20					25					30
Arg	His	Pro	Glu	Pro	Arg	Arg	Thr	Glu	His	Arg	Ala	Pro	Ser	Ser
				35					40					45
Thr	Trp	Arg	Pro	Val	Ala	Leu	Thr	Leu	Leu	Thr	Leu	Cys	Leu	Val
				50					55					60
Leu	Leu	Ile	Gly	Leu	Ala	Ala	Leu	Gly	Leu	Leu	Phe	Phe	Gln	Tyr
				65					70					75
Tyr	Gln	Leu	Ser	Asn	Thr	Gly	Gln	Asp	Thr	Ile	Ser	Gln	Met	Glu
				80					85					90
Glu	Arg	Leu	Gly	Asn	Thr	Ser	Gln	Glu	Leu	Gln	Ser	Leu	Gln	Val
				95					100					105
Gln	Asn	Ile	Lys	Leu	Ala	Gly	Ser	Leu	Gln	His	Val	Ala	Glu	Lys
				110					115					120
Leu	Cys	Arg	Glu	Leu	Tyr	Asn	Lys	Ala	Gly	Ala	His	Arg	Cys	Ser
				125					130					135
Pro	Cys	Thr	Glu	Gln	Trp	Lys	Trp	His	Gly	Asp	Asn	Cys	Tyr	Gln
				140					145					150
Phe	Tyr	Lys	Asp	Ser	Lys	Ser	Trp	Glu	Asp	Cys	Lys	Tyr	Phe	Cys
				155					160					165
Leu	Ser	Glu	Asn	Ser	Thr	Met	Leu	Lys	Ile	Asn	Lys	Gln	Glu	Asp
				170					175					180
Leu	Glu	Phe	Ala	Ala	Ser	Gln	Ser	Tyr	Ser	Glu	Phe	Phe	Tyr	Ser
				185					190					195
Tyr	Trp	Thr	Gly	Leu	Leu	Arg	Pro	Asp	Ser	Gly	Lys	Ala	Trp	Leu
				200					205					210
Trp	Met	Asp	Gly	Thr	Pro	Phe	Thr	Ser	Glu	Leu	Phe	His	Ile	Ile
				215					220					225
Ile	Asp	Val	Thr	Ser	Pro	Arg	Ser	Arg	Asp	Cys	Val	Ala	Ile	Leu
				230					235					240
Asn	Gly	Met	Ile	Phe	Ser	Lys	Asp	Cys	Lys	Glu	Leu	Lys	Arg	Cys
				245					250					255
Val	Cys	Glu	Arg	Arg	Ala	Gly	Met	Val	Lys	Pro	Glu	Ser	Leu	His
				260					265					270
Val	Pro	Pro	Glu	Thr	Leu	Gly	Glu	Gly	Asp					
				275					280					

<210> 320

<211> 468

<212> DNA

<213> Homo sapiens

<220>
<221> unsure
<222> 59, 95, 149, 331, 364, 438, 446
<223> unknown base

<400> 320
aattttcacc gctgtaggaa tccagatgca ggccaagtac agcagcacga 50
gggacatgnt ggatgatgat gggacaccac catgagcctg cattntcaag 100
cttttgccac aattcggcat ccagagcccc ggcgcacaga gcacagggnt 150
cctttttcaa cgtggcgacc agtggccctg accctgctga ctttgtgctt 200
ggtgctgctg atagggctgg cagccctggg gcttttgttt tttcagtact 250
accagctctc caatactggt caagacacca tttctcaaat ggaagaaaga 300
ttaggaaata cgtcccaaga gttgcaattt nttcaagtcc agaataataa 350
gcttgcagga agtntgcagc atgtggctga aaaactctgt cgtgagctgt 400
ataacaaagc tggaggaact ttgaaggagg gcaaagtntc ctcatntact 450
atacacacac cacttccc 468

<210> 321
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 321
atgcaggcca agtacagcag cac 23

<210> 322
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 322
catgctgacg acttcctgca agc 23

<210> 323
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 323
ccacacagtc tctgcttctt ggg 23

<210> 324
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 324
atgctggatg atgatgggga caccaccatg agcctgcatt 40

<210> 325
<211> 2988
<212> DNA
<213> Homo sapiens

<400> 325
gccgagcgca agaaccctgc gcagcccaga gcagctgctg gaggggaatc 50
gagggcgcggc tccggggatt cggctcgggc cgctggctct gctctgcggg 100
gagggagcgg gcccgccgc gggggccgag ccctccgat ccgccccctc 150
cccgggtccc cccctcgga gactcctctg gctgctctgg gggttcgccg 200
gggcccggga cccgcggtcc gggcgccatg cgggcatcgc tgctgctgtc 250
ggtgctgctg cccgcagggc ccgtggccgt gggcatctcc ctgggcttca 300
ccctgagcct gctcagcgtc acctgggtgg aggagccgtg cggcccaggc 350
ccgccccaac ctggagactc tgagctgccg ccgcgcggca acaccaacgc 400
ggcgcgcggg cccaactcgg tgcagcccgg agcggagcgc gagaagcccg 450
gggcccggga aggcgcggg gagaattggg agccgcgcgt cttgcccctac 500
caccctgcac agcccggcca ggccgcaaaa aaggccgtca ggaccgccta 550
catcagcacg gagctgggca tcaggcagag gctgctggtg gcggtgctga 600
cctctcagac cacgctgccc acgctgggcg tggccgtgaa ccgcacgctg 650
gggcaccggc tggagcgtgt ggtgttcctg acgggcgcac ggggcccgcg 700
ggccccacct ggcattggcag tggtgacgct gggcgaggag cgaccattg 750
gacacctgca cctggcgctg cgccacctgc tggagcagca cggcgacgac 800
tttgactggt tcttcctggt gcctgacacc acctacacc aggcgcacgg 850
cctggcacgc ctaactggcc acctcagcct ggccctccgc gccacctgt 900
acctgggccg gcccaggac ttcatcggcg gagagcccac ccccggccgc 950
tactgccacg gaggttttg ggtgctgctg tcgcgcatgc tgctgcaaca 1000
actgcgcccc cacctggaag gctgccgcaa cgacatcgtc agtgcgcgcc 1050
ctgacgagtg gctgggtcgc tgcattctcg atgccaccgg ggtgggctgc 1100
actggtgacc acgagggggt gcactatagc catctggagc tgagccctgg 1150
ggagccagtg caggaggggg accctcattt ccgaagtgcc ctgacagccc 1200
accctgtgcg tgaccctgtg cacatgtacc agctgcacaa agctttcgcc 1250
cgagctgaac tggaacgcac gtaccaggag atccaggagt tacagtggga 1300

gatocagaat accagccatc tggccgttga tggggaccgg gcagctgctt 1350
ggcccgtggg tattccagca ccatcccggc cggcctcccg ctttgagggtg 1400
ctgcgctggg actacttcac ggagcagcac gctttctcct gcgcgatgg 1450
ctcaccgccg tgcctactgc gtggggctga ccgggctgat gtggccgatg 1500
ttctggggac agctctagag gagctgaacc gccgctacca cccggccttg 1550
cggctccaga agcagcagct ggtgaatggc taccgacgct ttgatccggc 1600
ccgggggtatg gaatacacgc tggacttgca gctggaggca ctgaccccc 1650
agggaggccg ccggcccctc actcggcgag tgcagctgct ccggccgctg 1700
agccgctggg agatcttgcc tgtgccctat gtactgagg cctcacgtct 1750
cactgtgctg ctgcctctag ctgcggctga gcgtgacctg gccctgggt 1800
tcttgagggc ctttgccact gcagcactgg agcctggtga tgctgcggca 1850
gccctgacct tgctgctact gtatgagccg cggcaggccc agcgcgtggc 1900
ccatgcagat gtcttcgcac ctgtcaaggc ccacgtggca gagctggagc 1950
ggcgtttccc cggtgcccgg gtgccatggc tcagtgtgca gacagccgca 2000
ccctcaccac tgcgcctcat ggatctactc tccaagaagc acccgctgga 2050
cacactgttc ctgctggccg ggccagacac ggtgctcacg cctgacttcc 2100
tgaaccgctg ccgcatgcat gccatctccg gctggcaggc cttctttccc 2150
atgcatttcc aagccttcca ccaggtgtg gccccaccac aagggcctgg 2200
gccccagag ctgggcccgtg aactggccg ctttgatcgc caggcagcca 2250
gcgaggcctg cttctacaac tccgactacg tggcagcccg tgggcgcctg 2300
gcggcagcct cagaacaaga agaggagctg ctggagagcc tggatgtgta 2350
cgagctgttc ctccacttct ccagtctgca tgtgctgcgg gcggtggagc 2400
cggcgtgct gcagcgctac cggggccaga cgtgcagcgc gaggctcagt 2450
gaggacctgt accaccgctg cctccagagc gtgcttgagg gcctcggctc 2500
ccgaaccag ctggccatgc tactctttga acaggagcag ggcaacagca 2550
cctgacccca ccctgtcccc gtgggcccgtg gcatggccac accccacccc 2600
acttctcccc caaaaccaga gccacctgcc agcctcgctg ggcagggctg 2650
gccgtagcca gacccaagc tggcccactg gtccccctctc tggtctctgtg 2700
ggtccctggg ctctggacaa gactggggg acgtgcccc agagccaccc 2750
acttctcatc ccaaaccag tttccctgcc ccctgacgct gctgattcgg 2800
gctgtggcct ccacgtattt atgcagtaca gtctgcctga cgcagccct 2850
gcctctgggc cctgggggct gggctgtaga agagttgttg gggaaggagg 2900

gagctgagga gggggcatct cccaacttct cccttttggga ccctgccgaa 2950

gctccctgcc ttttaataaac tggccaagtg tggaaaaa 2988

<210> 326

<211> 775

<212> PRT

<213> Homo sapiens

<400> 326

Met	Arg	Ala	Ser	Leu	Leu	Leu	Ser	Val	Leu	Arg	Pro	Ala	Gly	Pro
1				5					10					15
Val	Ala	Val	Gly	Ile	Ser	Leu	Gly	Phe	Thr	Leu	Ser	Leu	Leu	Ser
				20					25					30
Val	Thr	Trp	Val	Glu	Glu	Pro	Cys	Gly	Pro	Gly	Pro	Pro	Gln	Pro
				35					40					45
Gly	Asp	Ser	Glu	Leu	Pro	Pro	Arg	Gly	Asn	Thr	Asn	Ala	Ala	Arg
				50					55					60
Arg	Pro	Asn	Ser	Val	Gln	Pro	Gly	Ala	Glu	Arg	Glu	Lys	Pro	Gly
				65					70					75
Ala	Gly	Glu	Gly	Ala	Gly	Glu	Asn	Trp	Glu	Pro	Arg	Val	Leu	Pro
				80					85					90
Tyr	His	Pro	Ala	Gln	Pro	Gly	Gln	Ala	Ala	Lys	Lys	Ala	Val	Arg
				95					100					105
Thr	Arg	Tyr	Ile	Ser	Thr	Glu	Leu	Gly	Ile	Arg	Gln	Arg	Leu	Leu
				110					115					120
Val	Ala	Val	Leu	Thr	Ser	Gln	Thr	Thr	Leu	Pro	Thr	Leu	Gly	Val
				125					130					135
Ala	Val	Asn	Arg	Thr	Leu	Gly	His	Arg	Leu	Glu	Arg	Val	Val	Phe
				140					145					150
Leu	Thr	Gly	Ala	Arg	Gly	Arg	Arg	Ala	Pro	Pro	Gly	Met	Ala	Val
				155					160					165
Val	Thr	Leu	Gly	Glu	Glu	Arg	Pro	Ile	Gly	His	Leu	His	Leu	Ala
				170					175					180
Leu	Arg	His	Leu	Leu	Glu	Gln	His	Gly	Asp	Asp	Phe	Asp	Trp	Phe
				185					190					195
Phe	Leu	Val	Pro	Asp	Thr	Thr	Tyr	Thr	Glu	Ala	His	Gly	Leu	Ala
				200					205					210
Arg	Leu	Thr	Gly	His	Leu	Ser	Leu	Ala	Ser	Ala	Ala	His	Leu	Tyr
				215					220					225
Leu	Gly	Arg	Pro	Gln	Asp	Phe	Ile	Gly	Gly	Glu	Pro	Thr	Pro	Gly
				230					235					240
Arg	Tyr	Cys	His	Gly	Gly	Phe	Gly	Val	Leu	Leu	Ser	Arg	Met	Leu
				245					250					255
Leu	Gln	Gln	Leu	Arg	Pro	His	Leu	Glu	Gly	Cys	Arg	Asn	Asp	Ile
				260					265					270

Val	Ser	Ala	Arg	Pro	Asp	Glu	Trp	Leu	Gly	Arg	Cys	Ile	Leu	Asp	275	280	285
Ala	Thr	Gly	Val	Gly	Cys	Thr	Gly	Asp	His	Glu	Gly	Val	His	Tyr	290	295	300
Ser	His	Leu	Glu	Leu	Ser	Pro	Gly	Glu	Pro	Val	Gln	Glu	Gly	Asp	305	310	315
Pro	His	Phe	Arg	Ser	Ala	Leu	Thr	Ala	His	Pro	Val	Arg	Asp	Pro	320	325	330
Val	His	Met	Tyr	Gln	Leu	His	Lys	Ala	Phe	Ala	Arg	Ala	Glu	Leu	335	340	345
Glu	Arg	Thr	Tyr	Gln	Glu	Ile	Gln	Glu	Leu	Gln	Trp	Glu	Ile	Gln	350	355	360
Asn	Thr	Ser	His	Leu	Ala	Val	Asp	Gly	Asp	Arg	Ala	Ala	Ala	Trp	365	370	375
Pro	Val	Gly	Ile	Pro	Ala	Pro	Ser	Arg	Pro	Ala	Ser	Arg	Phe	Glu	380	385	390
Val	Leu	Arg	Trp	Asp	Tyr	Phe	Thr	Glu	Gln	His	Ala	Phe	Ser	Cys	395	400	405
Ala	Asp	Gly	Ser	Pro	Arg	Cys	Pro	Leu	Arg	Gly	Ala	Asp	Arg	Ala	410	415	420
Asp	Val	Ala	Asp	Val	Leu	Gly	Thr	Ala	Leu	Glu	Glu	Leu	Asn	Arg	425	430	435
Arg	Tyr	His	Pro	Ala	Leu	Arg	Leu	Gln	Lys	Gln	Gln	Leu	Val	Asn	440	445	450
Gly	Tyr	Arg	Arg	Phe	Asp	Pro	Ala	Arg	Gly	Met	Glu	Tyr	Thr	Leu	455	460	465
Asp	Leu	Gln	Leu	Glu	Ala	Leu	Thr	Pro	Gln	Gly	Gly	Arg	Arg	Pro	470	475	480
Leu	Thr	Arg	Arg	Val	Gln	Leu	Leu	Arg	Pro	Leu	Ser	Arg	Val	Glu	485	490	495
Ile	Leu	Pro	Val	Pro	Tyr	Val	Thr	Glu	Ala	Ser	Arg	Leu	Thr	Val	500	505	510
Leu	Leu	Pro	Leu	Ala	Ala	Ala	Glu	Arg	Asp	Leu	Ala	Pro	Gly	Phe	515	520	525
Leu	Glu	Ala	Phe	Ala	Thr	Ala	Ala	Leu	Glu	Pro	Gly	Asp	Ala	Ala	530	535	540
Ala	Ala	Leu	Thr	Leu	Leu	Leu	Leu	Tyr	Glu	Pro	Arg	Gln	Ala	Gln	545	550	555
Arg	Val	Ala	His	Ala	Asp	Val	Phe	Ala	Pro	Val	Lys	Ala	His	Val	560	565	570
Ala	Glu	Leu	Glu	Arg	Arg	Phe	Pro	Gly	Ala	Arg	Val	Pro	Trp	Leu	575	580	585

Ser Val Gln Thr	Ala Ala Pro Ser Pro	Leu Arg Leu Met Asp Leu	590	595	600
Leu Ser Lys Lys	His Pro Leu Asp Thr	Leu Phe Leu Leu Ala Gly	605	610	615
Pro Asp Thr Val	Leu Thr Pro Asp Phe	Leu Asn Arg Cys Arg Met	620	625	630
His Ala Ile Ser	Gly Trp Gln Ala Phe	Phe Pro Met His Phe Gln	635	640	645
Ala Phe His Pro	Gly Val Ala Pro Pro	Gln Gly Pro Gly Pro Pro	650	655	660
Glu Leu Gly Arg	Asp Thr Gly Arg Phe	Asp Arg Gln Ala Ala Ser	665	670	675
Glu Ala Cys Phe	Tyr Asn Ser Asp Tyr	Val Ala Ala Arg Gly Arg	680	685	690
Leu Ala Ala Ala	Ser Glu Gln Glu Glu	Glu Leu Leu Glu Ser Leu	695	700	705
Asp Val Tyr Glu	Leu Phe Leu His Phe	Ser Ser Leu His Val Leu	710	715	720
Arg Ala Val Glu	Pro Ala Leu Leu Gln	Arg Tyr Arg Ala Gln Thr	725	730	735
Cys Ser Ala Arg	Leu Ser Glu Asp Leu	Tyr His Arg Cys Leu Gln	740	745	750
Ser Val Leu Glu	Gly Leu Gly Ser Arg	Thr Gln Leu Ala Met Leu	755	760	765
Leu Phe Glu Gln	Glu Gln Gly Asn Ser Thr		770	775	

<210> 327
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 327
 tggaaggctg ccgcaacgac aatc 24

<210> 328
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 328
 ctgatgtggc cgatgttctg 20

<210> 329
 <211> 20

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 329
atggctcagt gtgcagacag 20

<210> 330
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 330
gcatgctgct ccgtgaagta gtcc 24

<210> 331
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 331
atgcatggga aagaaggcct gccc 24

<210> 332
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 332
tgactggtg accacgaggg ggtgcactat agccatctgg agctgag 47

<210> 333
<211> 1095
<212> DNA
<213> Homo sapiens

<400> 333
gctctggccg gcccggcgga ttggtcaccg cccgctaggg gacagccctg 50
gcctcctctg attggcaagc gctggccacc tccccacacc cttgccaac 100
gctcccctag tggagaaaag gagtagctat tagccaattc ggcagggcc 150
gctttttaga agcttgattt ctttgaaga tgaaagacta gcggaagctc 200
tgccctcttc ccagtgggc gaggggaactc ggggcgattg gctgggaact 250
gtatccacc aaatgtcacc gatttcttc tatgcaggaa atgagcagac 300
ccatcaataa gaaatttctc agcctggccg aaaatggttg gccccacgaa 350
gccacgacaa ctggaggcaa agagggttgc tcaacgcccc gcctcattgg 400

aaaaccaa at cagatctggg acctatatag cgtggcggag gcggggcgat 450
 gattgtcgcg ctgcaccca ctgcagctgc gcacagtcgc atttctttcc 500
 cgcggcctga gaccctgcag caccatctgt catggcgggt gggctgtttg 550
 gtttgagcgc tcgccgtctt ttggcggcag cggcgacgcg agggctcccc 600
 gccgcccgcg tccgctggga atctagcttc tccaggactg tggtcgcccc 650
 gtccgctgtg gcgggaaagc ggccccaga accgaccaca ccgtggcaag 700
 aggaccaga acccgaggac gaaaacttgt atgagaagaa cccagactcc 750
 catggttatg acaaggaccc cgttttggac gtctggaaca tgcgacttgt 800
 cttcttcttt ggcgtctcca tcctcttgtt ccttggcagc acctttgtgg 850
 cctatctgcc tgactacagg atgaaagagt ggtcccgcgc cgaagctgag 900
 aggcttgtga aataccgaga ggccaatggc cttcccatca tggaatccaa 950
 ctgcttcgac cccagcaaga tccagctgcc agaggatgag tgaccagttg 1000
 ctaagtgggg ctcaagaagc accgccttcc ccaccccctg cctgcccattc 1050
 tgacctcttc tcagagcacc taattaaagg ggctgaaagt ctgaa 1095

<210> 334

<211> 153

<212> PRT

<213> Homo sapiens

<400> 334

Met	Ala	Ala	Gly	Leu	Phe	Gly	Leu	Ser	Ala	Arg	Arg	Leu	Leu	Ala
1				5					10					15
Ala	Ala	Ala	Thr	Arg	Gly	Leu	Pro	Ala	Ala	Arg	Val	Arg	Trp	Glu
				20					25					30
Ser	Ser	Phe	Ser	Arg	Thr	Val	Val	Ala	Pro	Ser	Ala	Val	Ala	Gly
				35					40					45
Lys	Arg	Pro	Pro	Glu	Pro	Thr	Thr	Pro	Trp	Gln	Glu	Asp	Pro	Glu
				50					55					60
Pro	Glu	Asp	Glu	Asn	Leu	Tyr	Glu	Lys	Asn	Pro	Asp	Ser	His	Gly
				65					70					75
Tyr	Asp	Lys	Asp	Pro	Val	Leu	Asp	Val	Trp	Asn	Met	Arg	Leu	Val
				80					85					90
Phe	Phe	Phe	Gly	Val	Ser	Ile	Ile	Leu	Val	Leu	Gly	Ser	Thr	Phe
				95					100					105
Val	Ala	Tyr	Leu	Pro	Asp	Tyr	Arg	Met	Lys	Glu	Trp	Ser	Arg	Arg
				110					115					120
Glu	Ala	Glu	Arg	Leu	Val	Lys	Tyr	Arg	Glu	Ala	Asn	Gly	Leu	Pro
				125					130					135
Ile	Met	Glu	Ser	Asn	Cys	Phe	Asp	Pro	Ser	Lys	Ile	Gln	Leu	Pro
				140					145					150

Glu Asp Glu

<210> 335
<211> 442
<212> DNA
<213> Homo sapiens

<400> 335
ggcggctggg ctgttttggt tgagcgctcg ccgtcttttg gcggcagcgg 50
cgacgcgagg gctcccggcc gcccgcgctc gctgggaatc tagcttctcc 100
aggactgtgg tcgccccgtc cgctgtggcg ggaaagcggc cccagaacc 150
gaccacaccg tggcaagagg acccagaacc cgaggacgaa aacttgatg 200
agaagaaccc agactcccat gggtatgaca aggaccccg tttggacgtc 250
tggaacatgc gacttgctctt cttctttggc gtctccatca tcttggtcct 300
tggcagcacc tttgtggcct atctgcctga ctacaggatg aaagagtgg 350
ccgcgcgca agctgagagg cttgtgaaat accgagaggc caatggcctt 400
cccatcatgg aatccaactg cttcgacccc agcaagatcc ag 442

<210> 336
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 336
ctgagaccct gcagaccat ctg 23

<210> 337
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 337
ggtgcttctt gagccccact tagc 24

<210> 338
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 338
aatctagctt ctccaggact gtggtcgccc cgtccgctgt 40

<210> 339
<211> 2162
<212> DNA

<213> Homo sapiens

<400> 339

gcggcgggcta tgccgcttgc tctgctcgtc ctgttgctcc tggggcccg 50
cggctggtgc cttgcagaac cccacgcga cagcctgcgg gaggaacttg 100
tcatcacccc gctgccttcc ggggacgtag ccgccacatt ccagttccgc 150
acgcgctggg attcggagct tcagcgggaa ggagtgtccc attacaggct 200
ctttcccaaa gccctggggc agctgatctc caagtattct ctacgggagc 250
tgcacctgtc attcacacaa ggcttttga ggacccgata ctgggggcca 300
cccttcctgc aggccccatc aggtgcagag ctgtgggtct ggttccaaga 350
cactgtcact gatgtggata aatcttggaa ggagctcagt aatgtcctct 400
cagggatctt ctgcgcctct ctcaacttca tcgactccac caacacagtc 450
actcccactg cctccttcaa acccctgggt ctggccaatg aactgacca 500
ctactttctg cgctatgctg tgctgccgcg ggaggtggtc tgcaccgaaa 550
acctcacccc ctggaagaag ctcttgccct gtagttccaa ggcaggcctc 600
tctgtgctgc tgaaggcaga tcgcttgttc cacaccagct accactccca 650
ggcagtgcac atccgccctg tttgcagaaa tgcacgctgt actagcatct 700
cctgggagct gaggcagacc ctgtcagttg tatttgatgc cttcatcacg 750
gggcagggaa agaaagactg gtccctcttc cggatgttct cccgaaccct 800
cacggagccc tgccccctgg cttcagagag ccgagtctat gtggacatca 850
ccacctacaa ccaggacaac gagacattag aggtgcaccc acccccgacc 900
actacatatc aggacgtcat cctaggcact cggaagacct atgccatcta 950
tgacttgctt gacaccgcca tgatcaacaa ctctcgaaac ctcaacatcc 1000
agctcaagtg gaagagaccc ccagagaatg agggcccccc agtgcccttc 1050
ctgcatgccc agcggtagct gagtggctat gggctgcaga agggggagct 1100
gagcacactg ctgtacaaca cccaccata ccgggccttc ccggtgctgc 1150
tgctggacac cgtaccctgg tatctgcggc tgtatgtgca caccctcacc 1200
atcacctcca agggcaagga gaacaaacca agttacatcc actaccagcc 1250
tgcccaggac cggctgcaac cccacctcct ggagatgctg attcagctgc 1300
cggccaactc agtcaccaag gtttccatcc agtttgagcg ggcgctgctg 1350
aagtggaccg agtacacgcc agatcctaac catggcttct atgtcagccc 1400
atctgtcctc agcgcccttg tgcccagcat ggtagcagcc aagccagtgg 1450
actgggaaga gagtcccctc ttcaacagcc tgttcccagt ctctgatggc 1500

tctaactact ttgtgogggt ctacacggag ccgctgctgg tgaacctgcc 1550
gacaccggac ttcagcatgc cctacaacgt gatctgcctc acgtgcactg 1600
tggtgggcgt gtgctacggc tccttctaca atctcctcac ccgaaccttc 1650
cacatcgagg agccccgcac aggtggcctg gccaaagcgc tggccaacct 1700
tatccggcgc gcccgagggtg tccccccact ctgattcttg ccctttccag 1750
cagctgcagc tgccgtttct ctctggggag gggagcccaa gggctgtttc 1800
tgccacttgc tctcctcaga gttggctttt gaaccaaagt gccctggacc 1850
aggtcagggc ctacagctgt gttgtccagt acaggagcca cgagccaaat 1900
gtggcatttg aatttgaatt aacttagaaa ttcatttcct cacctgtagt 1950
ggccacctct atattgaggt gctcaataag caaaagtggc cggtgggctgc 2000
tgtattggac agcacagaaa aagatttcca tcaccacaga aaggtcggct 2050
ggcagcactg gccaaagtga tgggggtgtgc tacacagtgt atgtcactgt 2100
gtagtggatg gagtttactg tttgtggaat aaaaacggct gtttccgtgg 2150
aaaaaaaaaa aa 2162

<210> 340
<211> 574
<212> PRT
<213> Homo sapiens

<400> 340
Met Pro Leu Ala Leu Leu Val Leu Leu Leu Leu Gly Pro Gly Gly
1 5 10 15
Trp Cys Leu Ala Glu Pro Pro Arg Asp Ser Leu Arg Glu Glu Leu
20 25 30
Val Ile Thr Pro Leu Pro Ser Gly Asp Val Ala Ala Thr Phe Gln
35 40 45
Phe Arg Thr Arg Trp Asp Ser Glu Leu Gln Arg Glu Gly Val Ser
50 55 60
His Tyr Arg Leu Phe Pro Lys Ala Leu Gly Gln Leu Ile Ser Lys
65 70 75
Tyr Ser Leu Arg Glu Leu His Leu Ser Phe Thr Gln Gly Phe Trp
80 85 90
Arg Thr Arg Tyr Trp Gly Pro Pro Phe Leu Gln Ala Pro Ser Gly
95 100 105
Ala Glu Leu Trp Val Trp Phe Gln Asp Thr Val Thr Asp Val Asp
110 115 120
Lys Ser Trp Lys Glu Leu Ser Asn Val Leu Ser Gly Ile Phe Cys
125 130 135
Ala Ser Leu Asn Phe Ile Asp Ser Thr Asn Thr Val Thr Pro Thr
140 145 150

Ala	Ser	Phe	Lys	Pro	Leu	Gly	Leu	Ala	Asn	Asp	Thr	Asp	His	Tyr	155	160	165
Phe	Leu	Arg	Tyr	Ala	Val	Leu	Pro	Arg	Glu	Val	Val	Cys	Thr	Glu	170	175	180
Asn	Leu	Thr	Pro	Trp	Lys	Lys	Leu	Leu	Pro	Cys	Ser	Ser	Lys	Ala	185	190	195
Gly	Leu	Ser	Val	Leu	Leu	Lys	Ala	Asp	Arg	Leu	Phe	His	Thr	Ser	200	205	210
Tyr	His	Ser	Gln	Ala	Val	His	Ile	Arg	Pro	Val	Cys	Arg	Asn	Ala	215	220	225
Arg	Cys	Thr	Ser	Ile	Ser	Trp	Glu	Leu	Arg	Gln	Thr	Leu	Ser	Val	230	235	240
Val	Phe	Asp	Ala	Phe	Ile	Thr	Gly	Gln	Gly	Lys	Lys	Asp	Trp	Ser	245	250	255
Leu	Phe	Arg	Met	Phe	Ser	Arg	Thr	Leu	Thr	Glu	Pro	Cys	Pro	Leu	260	265	270
Ala	Ser	Glu	Ser	Arg	Val	Tyr	Val	Asp	Ile	Thr	Thr	Tyr	Asn	Gln	275	280	285
Asp	Asn	Glu	Thr	Leu	Glu	Val	His	Pro	Pro	Pro	Thr	Thr	Thr	Tyr	290	295	300
Gln	Asp	Val	Ile	Leu	Gly	Thr	Arg	Lys	Thr	Tyr	Ala	Ile	Tyr	Asp	305	310	315
Leu	Leu	Asp	Thr	Ala	Met	Ile	Asn	Asn	Ser	Arg	Asn	Leu	Asn	Ile	320	325	330
Gln	Leu	Lys	Trp	Lys	Arg	Pro	Pro	Glu	Asn	Glu	Ala	Pro	Pro	Val	335	340	345
Pro	Phe	Leu	His	Ala	Gln	Arg	Tyr	Val	Ser	Gly	Tyr	Gly	Leu	Gln	350	355	360
Lys	Gly	Glu	Leu	Ser	Thr	Leu	Leu	Tyr	Asn	Thr	His	Pro	Tyr	Arg	365	370	375
Ala	Phe	Pro	Val	Leu	Leu	Leu	Asp	Thr	Val	Pro	Trp	Tyr	Leu	Arg	380	385	390
Leu	Tyr	Val	His	Thr	Leu	Thr	Ile	Thr	Ser	Lys	Gly	Lys	Glu	Asn	395	400	405
Lys	Pro	Ser	Tyr	Ile	His	Tyr	Gln	Pro	Ala	Gln	Asp	Arg	Leu	Gln	410	415	420
Pro	His	Leu	Leu	Glu	Met	Leu	Ile	Gln	Leu	Pro	Ala	Asn	Ser	Val	425	430	435
Thr	Lys	Val	Ser	Ile	Gln	Phe	Glu	Arg	Ala	Leu	Leu	Lys	Trp	Thr	440	445	450
Glu	Tyr	Thr	Pro	Asp	Pro	Asn	His	Gly	Phe	Tyr	Val	Ser	Pro	Ser	455	460	465

Val	Leu	Ser	Ala	Leu	Val	Pro	Ser	Met	Val	Ala	Ala	Lys	Pro	Val	
				470					475					480	
Asp	Trp	Glu	Glu	Ser	Pro	Leu	Phe	Asn	Ser	Leu	Phe	Pro	Val	Ser	
				485					490					495	
Asp	Gly	Ser	Asn	Tyr	Phe	Val	Arg	Leu	Tyr	Thr	Glu	Pro	Leu	Leu	
				500					505					510	
Val	Asn	Leu	Pro	Thr	Pro	Asp	Phe	Ser	Met	Pro	Tyr	Asn	Val	Ile	
				515					520					525	
Cys	Leu	Thr	Cys	Thr	Val	Val	Ala	Val	Cys	Tyr	Gly	Ser	Phe	Tyr	
				530					535					540	
Asn	Leu	Leu	Thr	Arg	Thr	Phe	His	Ile	Glu	Glu	Pro	Arg	Thr	Gly	
				545					550					555	
Gly	Leu	Ala	Lys	Arg	Leu	Ala	Asn	Leu	Ile	Arg	Arg	Ala	Arg	Gly	
				560					565					570	

Val Pro Pro Leu

<210> 341
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 341
 tggacaccgt accctggtat ctgc 24

<210> 342
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> Artificial Sequence
 <222> 1-24
 <223> Synthetic oligonucleotide probe

<400> 342
 ccaactctga ggagagcaag tggc 24

<210> 343
 <211> 44
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 343
 tgtatgtgca caccctcacc atcacctcca agggcaagga gaac 44

<210> 344
 <211> 762
 <212> DNA
 <213> Homo sapiens

```

<400> 344
caacatgggg tccagcagct tcttggtcct catggtgtct ctggttcttg 50
tgaccctggg ggctgtggaa ggagttaaag agggatataga gaaagcaggg 100
gtttgcccag ctgacaacgt acgctgcttc aagtccgata ctccccagtg 150
tcacacagac caggactgtc tgggggaaaag gaagtgttgt tacctgcact 200
gtggcttcaa gtgtgtgatt cctgtgaagg aactggaaga aggaggaaac 250
aaggatgaag atgtgtcaag gccataccct gagccaggat gggaggccaa 300
gtgtccaggc tctcctcta ccagggtgtcc tcagaaatga tgctgggtcc 350
tttctacctc tgggggtcac tctcacttgg cacctgcccc tgagggtcct 400
gagacttgga atatggaaga agcaataccc aacccccacca aagaaaacct 450
gagcttgaag tccttttccc caaaaagagg gaagagtcac aaaaagtcca 500
gaccccaggg acggtacttt cctctcttac ctggtgctcc tccctaattgc 550
tcatgaatgg acccctcatg aatgaaacca gtgcccttat aagagacccc 600
aaagagctgc cttgcccttc tgcaatgtgt gatcacagct agaaggcact 650
gtcagagaag agaaactggc cctcaccaga tgctgaatct gctggtgcct 700
tgatcttgga cttcccagcc tctagaactg taagaaataa atatttgctg 750
tttataatcc aa 762

```

```

<210> 345
<211> 111
<212> PRT
<213> Homo sapiens

```

```

<400> 345
Met Gly Ser Ser Ser Phe Leu Val Leu Met Val Ser Leu Val Leu
  1             5             10             15
Val Thr Leu Val Ala Val Glu Gly Val Lys Glu Gly Ile Glu Lys
          20          25          30
Ala Gly Val Cys Pro Ala Asp Asn Val Arg Cys Phe Lys Ser Asp
          35          40          45
Pro Pro Gln Cys His Thr Asp Gln Asp Cys Leu Gly Glu Arg Lys
          50          55          60
Cys Cys Tyr Leu His Cys Gly Phe Lys Cys Val Ile Pro Val Lys
          65          70          75
Glu Leu Glu Glu Gly Gly Asn Lys Asp Glu Asp Val Ser Arg Pro
          80          85          90
Tyr Pro Glu Pro Gly Trp Glu Ala Lys Cys Pro Gly Ser Ser Ser
          95         100         105
Thr Arg Cys Pro Gln Lys
          110

```

<210> 346
<211> 2528
<212> DNA
<213> Homo sapiens

<400> 346
aaactcagca cttgccggag tggctcattg ttaagacaaa ggggtgtgcac 50
ttcctggcca ggaaacctga gcggtgagac tcccagctgc ctacatcaag 100
gccccaggac atgcagaacc ttcctctaga acccgaccca ccaccatgag 150
gtcctgcctg tggagatgca ggcacctgag ccaaggcgtc cagtggctct 200
tgcttctggc tgtcctggtc ttctttctct tgccttgcc ctcttttatt 250
aaggagcctc aaacaaagcc ttccaggcat caacgcacag agaacattaa 300
agaaaggtct ctacagtccc tggcaaagcc taagtcccag gcaccacaa 350
gggcgaggag gacaaccatc tatgcagagc cagcgccaga gaacaatgcc 400
ctcaacacac aaaccagcc caaggccac accaccggag acagaggaaa 450
ggaggccaac caggcaccgc cggaggagca ggacaaggtg cccacacag 500
cacagagggc agcatggaag agcccagaaa aagagaaaac catggtgaac 550
acactgtcac ccagagggca agatgcaggg atggcctctg gcaggacaga 600
ggcacaatca tggaagagcc aggacacaaa gacgaccaa ggaaatgggg 650
gccagaccag gaagctgacg gcctccagga cgggtgtcaga gaagcaccag 700
ggcaaagcgg caaccacagc caagacgctc attcccaaaa gtcagcacag 750
aatgctggct cccacaggag cagtgtcaac aaggacgaga cagaaaggag 800
tgaccacagc agtcatcca cctaaggaga agaaacctca ggccaccca 850
ccccctgccc ctttcagag cccacgacg cagagaaacc aaagactgaa 900
ggccgccaac ttcaaactctg agcctcgggtg ggattttgag gaaaaatata 950
gcttcgaaat aggaggcctt cagacgactt gccctgactc tgtgaagatc 1000
aaagcctcca agtcgctgtg gctccagaaa ctctttctgc ccaacctcac 1050
tctcttcctg gactccagac acttcaacca gagtgagtgg gaccgcctgg 1100
aacactttgc accacccttt ggcttcatgg agctcaacta ctcttggtg 1150
cagaaggtcg tgacacgctt ccctccagtg cccagcagc agctgctcct 1200
ggccagcctc cccgctggga gcctccggtg catcacctgt gccgtggtgg 1250
gcaacggggg catcctgaac aactcccaca tgggccagga gatagacagt 1300
cacgactacg tgttccgatt gagcggagct ctcattaaag gctacgaaca 1350
ggatgtgggg actcggacat ctttctacgg ctttaccgcc ttctccctga 1400
cccagtcact ccttatattg ggcaatcggg gtttcaagaa cgtgcctctt 1450

gggaaggacg tccgctactt gcacttctctg gaaggcacccc gggactatga 1500
 gtggctggaa gcactgctta tgaatcagac ggtgatgtca aaaaaccttt 1550
 tctgggttcag gcacagaccc caggaagctt ttcgggaagc cctgcacatg 1600
 gacaggtacc tggtgctgca cccagacttt ctccgataca tgaagaacag 1650
 gtttctgagg tctaagaccc tggatggtgc ccaactggagg atataccgcc 1700
 ccaccactgg ggccctctctg ctgctcactg cccttcagct ctgtgaccag 1750
 gtgagtgcct atggcttcat cactgagggc catgagcgct tttctgatca 1800
 ctactatgat acatcatgga agcggctgat cttttacata aaccatgact 1850
 tcaagctgga gagagaagtc tggaagcggc tacacgatga agggataatc 1900
 cggctgtacc agcgtcctgg tcccggaaact gccaaagcca agaactgacc 1950
 ggggccaggg ctgccatggt ctccctgcct gctccaaggc acaggataca 2000
 gtgggaatct tgagactctt tggccatttc ccatggtctca gactaagctc 2050
 caagcccttc aggagttcca agggaacact tgaaccatgg acaagactct 2100
 ctcaagatgg caaatggcta attgaggttc tgaagttctt cagtacattg 2150
 ctgtaggtcc tgaggccagg gatttttaat taaatggggg gatgggtggc 2200
 caataccaca attcctgctg aaaaacactc' ttccagtcca aaagcttctt 2250
 gatacagaaa aaagagcctg gatttacaga aacatataga tctggtttga 2300
 attccagatc gagtttacag ttgtgaaatc ttgaaggat tacttaactt 2350
 cactacagat tgtctagaag acctttctag gagttatctg attctagaag 2400
 ggtctatact tgtccttgct tttaaactat ttgacaactc tacgtgttgt 2450
 agaaaactga taataatata aatgattggt gtccatggaa aggcaaataa 2500
 attttctaca gtgaaaaaaaa aaaaaaaaa 2528

<210> 347

<211> 600

<212> PRT

<213> Homo sapiens

<400> 347

Met	Arg	Ser	Cys	Leu	Trp	Arg	Cys	Arg	His	Leu	Ser	Gln	Gly	Val
1				5					10					15
Gln	Trp	Ser	Leu	Leu	Leu	Ala	Val	Leu	Val	Phe	Phe	Leu	Phe	Ala
			20						25					30
Leu	Pro	Ser	Phe	Ile	Lys	Glu	Pro	Gln	Thr	Lys	Pro	Ser	Arg	His
			35						40					45
Gln	Arg	Thr	Glu	Asn	Ile	Lys	Glu	Arg	Ser	Leu	Gln	Ser	Leu	Ala
			50						55					60
Lys	Pro	Lys	Ser	Gln	Ala	Pro	Thr	Arg	Ala	Arg	Arg	Thr	Thr	Ile

	65	70	75
Tyr Ala Glu Pro	Ala Pro Glu Asn Asn	Ala Leu Asn Thr Gln Thr	80 85 90
Gln Pro Lys Ala	His Thr Thr Gly Asp	Arg Gly Lys Glu Ala Asn	95 100 105
Gln Ala Pro Pro	Glu Glu Gln Asp Lys	Val Pro His Thr Ala Gln	110 115 120
Arg Ala Ala Trp	Lys Ser Pro Glu Lys	Glu Lys Thr Met Val Asn	125 130 135
Thr Leu Ser Pro	Arg Gly Gln Asp Ala	Gly Met Ala Ser Gly Arg	140 145 150
Thr Glu Ala Gln	Ser Trp Lys Ser Gln	Asp Thr Lys Thr Thr Gln	155 160 165
Gly Asn Gly Gly	Gln Thr Arg Lys Leu	Thr Ala Ser Arg Thr Val	170 175 180
Ser Glu Lys His	Gln Gly Lys Ala Ala	Thr Thr Ala Lys Thr Leu	185 190 195
Ile Pro Lys Ser	Gln His Arg Met Leu	Ala Pro Thr Gly Ala Val	200 205 210
Ser Thr Arg Thr	Arg Gln Lys Gly Val	Thr Thr Ala Val Ile Pro	215 220 225
Pro Lys Glu Lys	Lys Pro Gln Ala Thr	Pro Pro Pro Ala Pro Phe	230 235 240
Gln Ser Pro Thr	Thr Gln Arg Asn Gln	Arg Leu Lys Ala Ala Asn	245 250 255
Phe Lys Ser Glu	Pro Arg Trp Asp Phe	Glu Glu Lys Tyr Ser Phe	260 265 270
Glu Ile Gly Gly	Leu Gln Thr Thr Cys	Pro Asp Ser Val Lys Ile	275 280 285
Lys Ala Ser Lys	Ser Leu Trp Leu Gln	Lys Leu Phe Leu Pro Asn	290 295 300
Leu Thr Leu Phe	Leu Asp Ser Arg His	Phe Asn Gln Ser Glu Trp	305 310 315
Asp Arg Leu Glu	His Phe Ala Pro Pro	Phe Gly Phe Met Glu Leu	320 325 330
Asn Tyr Ser Leu	Val Gln Lys Val Val	Thr Arg Phe Pro Pro Val	335 340 345
Pro Gln Gln Gln	Leu Leu Leu Ala Ser	Leu Pro Ala Gly Ser Leu	350 355 360
Arg Cys Ile Thr	Cys Ala Val Val Gly	Asn Gly Gly Ile Leu Asn	365 370 375
Asn Ser His Met	Gly Gln Glu Ile Asp	Ser His Asp Tyr Val Phe	

380										385					390				
Arg	Leu	Ser	Gly	Ala	Leu	Ile	Lys	Gly	Tyr	Glu	Gln	Asp	Val	Gly					
				395					400					405					
Thr	Arg	Thr	Ser	Phe	Tyr	Gly	Phe	Thr	Ala	Phe	Ser	Leu	Thr	Gln					
				410					415					420					
Ser	Leu	Leu	Ile	Leu	Gly	Asn	Arg	Gly	Phe	Lys	Asn	Val	Pro	Leu					
				425					430					435					
Gly	Lys	Asp	Val	Arg	Tyr	Leu	His	Phe	Leu	Glu	Gly	Thr	Arg	Asp					
				440					445					450					
Tyr	Glu	Trp	Leu	Glu	Ala	Leu	Leu	Met	Asn	Gln	Thr	Val	Met	Ser					
				455					460					465					
Lys	Asn	Leu	Phe	Trp	Phe	Arg	His	Arg	Pro	Gln	Glu	Ala	Phe	Arg					
				470					475					480					
Glu	Ala	Leu	His	Met	Asp	Arg	Tyr	Leu	Leu	Leu	His	Pro	Asp	Phe					
				485					490					495					
Leu	Arg	Tyr	Met	Lys	Asn	Arg	Phe	Leu	Arg	Ser	Lys	Thr	Leu	Asp					
				500					505					510					
Gly	Ala	His	Trp	Arg	Ile	Tyr	Arg	Pro	Thr	Thr	Gly	Ala	Leu	Leu					
				515					520					525					
Leu	Leu	Thr	Ala	Leu	Gln	Leu	Cys	Asp	Gln	Val	Ser	Ala	Tyr	Gly					
				530					535					540					
Phe	Ile	Thr	Glu	Gly	His	Glu	Arg	Phe	Ser	Asp	His	Tyr	Tyr	Asp					
				545					550					555					
Thr	Ser	Trp	Lys	Arg	Leu	Ile	Phe	Tyr	Ile	Asn	His	Asp	Phe	Lys					
				560					565					570					
Leu	Glu	Arg	Glu	Val	Trp	Lys	Arg	Leu	His	Asp	Glu	Gly	Ile	Ile					
				575					580					585					
Arg	Leu	Tyr	Gln	Arg	Pro	Gly	Pro	Gly	Thr	Ala	Lys	Ala	Lys	Asn					
				590					595					600					

<210> 348
 <211> 496
 <212> DNA
 <213> Homo sapiens

<400> 348
 cgatgcgcgg acccgggcac cccctcctcc tggggctgct gctggtgctg 50
 gggccttcgc cggagcagcg agtggaaatt gttcctcgag atctgaggat 100
 gaaggacaag tttctaaaac accttacagg ccctctttat tttagtccaa 150
 agtgcagcaa acacttccat agactttatc acâacaccag agactgcacc 200
 attcctgcat actataaaag atgcgccagg cttcttacct ggctggctgt 250
 cagtccagtg tgcattggagg ataagtgagc agaccgtaca ggagcagcac 300
 accaggagcc atgagaagtg ccttggaac caacagggaa acagaactat 350

ctttatacac atcccctcat ggacaagaga tttatTTTTg cagacagact 400
 cttccataag tcctttgagt tttgtatgtt gttgacagtt tgcagatata 450
 tattcgataa atcagtgtac ttgacagtgt tatctgtcac ttatttt 496

<210> 349
 <211> 91
 <212> PRT
 <213> Homo sapiens

<400> 349
 Met Arg Gly Pro Gly His Pro Leu Leu Leu Gly Leu Leu Leu Val
 1 5 10 15
 Leu Gly Pro Ser Pro Glu Gln Arg Val Glu Ile Val Pro Arg Asp
 20 25 30
 Leu Arg Met Lys Asp Lys Phe Leu Lys His Leu Thr Gly Pro Leu
 35 40 45
 Tyr Phe Ser Pro Lys Cys Ser Lys His Phe His Arg Leu Tyr His
 50 55 60
 Asn Thr Arg Asp Cys Thr Ile Pro Ala Tyr Tyr Lys Arg Cys Ala
 65 70 75
 Arg Leu Leu Thr Arg Leu Ala Val Ser Pro Val Cys Met Glu Asp
 80 85 90
 Lys

<210> 350
 <211> 1141
 <212> DNA
 <213> Homo sapiens

<400> 350
 gggctgggccc ccgccgcagc tccagctggc cggtttggtc ctgcggtccc 50
 ttctctggga ggcccgaccc cgcccgcgcc cagccccccac catgccaccc 100
 gcggggctcc gccgggcccgc gccgctcacc gcaatcgctc tgttggtgct 150
 gggggctccc ctggtgctgg ccggcgagga ctgcctgtgg tacctggacc 200
 ggaatggctc ctggcatccg gggtttaact gcgagttctt caccttctgc 250
 tgcgggacct gctaccatcg gtactgctgc agggacctga ccttgcttat 300
 caccgagagg cagcagaagc actgcctggc cttcagcccc aagaccatag 350
 caggcatcgc ctgagctgtg atcctctttg ttgctgtggt tgccaccacc 400
 atctgctgct tcctctgttc ctgttgctac ctgtaccgcc ggcgccagca 450
 gctccagagc ccatttgaag gccaggagat tccaatgaca ggcattccag 500
 tgcagccagt atacccatac cccaggacc ccaaagctgg ccctgcaccc 550
 ccacagcctg gttcatgta ccacctagt ggtcctgctc cccaatatcc 600

actctaccca gctgggcccc cagtctacaa ccctgcagct cctcctccct 650
 atatgccacc acagccctct taccggggag cctgaggaac cagccatgtc 700
 tctgctgccc cttcagtgat gccaaccttg ggagatgccc tcatcctgta 750
 cctgcatctg gtcctggggg tggcaggagt cctccagcca ccaggcccca 800
 gaccaagcca agccctgggc cctactgggg acagagcccc aggggaagtgg 850
 aacaggagct gaactagaac tatgaggggt tggggggagg gcttggaatt 900
 atgggctatt tttactgggg gcaagggagg gagatgacag cctgggtcac 950
 agtgccctgtt ttcaaatagt ccctctgctc ccaagatccc agccaggaag 1000
 gctggggccc tactgtttgt ccctctggg ctgggggtggg gggagggagg 1050
 aggttccgtc agcagctggc agtagccctc ctctctggct gccccactgg 1100
 ccacatctct ggcctgctag attaaagctg taaagacaaa a 1141

<210> 351
 <211> 197
 <212> PRT
 <213> Homo sapiens

<400> 351
 Met Pro Pro Ala Gly Leu Arg Arg Ala Ala Pro Leu Thr Ala Ile
 1 5 10 15
 Ala Leu Leu Val Leu Gly Ala Pro Leu Val Leu Ala Gly Glu Asp
 20 25 30
 Cys Leu Trp Tyr Leu Asp Arg Asn Gly Ser Trp His Pro Gly Phe
 35 40 45
 Asn Cys Glu Phe Phe Thr Phe Cys Cys Gly Thr Cys Tyr His Arg
 50 55 60
 Tyr Cys Cys Arg Asp Leu Thr Leu Leu Ile Thr Glu Arg Gln Gln
 65 70 75
 Lys His Cys Leu Ala Phe Ser Pro Lys Thr Ile Ala Gly Ile Ala
 80 85 90
 Ser Ala Val Ile Leu Phe Val Ala Val Val Ala Thr Thr Ile Cys
 95 100 105
 Cys Phe Leu Cys Ser Cys Cys Tyr Leu Tyr Arg Arg Arg Gln Gln
 110 115 120
 Leu Gln Ser Pro Phe Glu Gly Gln Glu Ile Pro Met Thr Gly Ile
 125 130 135
 Pro Val Gln Pro Val Tyr Pro Tyr Pro Gln Asp Pro Lys Ala Gly
 140 145 150
 Pro Ala Pro Pro Gln Pro Gly Phe Met Tyr Pro Pro Ser Gly Pro
 155 160 165
 Ala Pro Gln Tyr Pro Leu Tyr Pro Ala Gly Pro Pro Val Tyr Asn
 170 175 180

Pro Ala Ala Pro Pro Pro Tyr Met Pro Pro Gln Pro Ser Tyr Pro
 185 190 195

Gly Ala

<210> 352
 <211> 3226
 <212> DNA
 <213> Homo sapiens

<400> 352
 gggggagcta ggccggcggc agtgggtggtg gcggcgggcg aaggggtgagg 50
 gcggccccag aaccccaggt aggtagagca agaagatggt gtttctgccc 100
 ctcaaagtgt cccttgcaac catgtcattt ctactttcct cactgttggc 150
 tctcttaact gtgtccactc cttcatggtg tcagagcact gaagcatctc 200
 caaaacgtag tgatgggaca ccatttcctt ggaataaaat acgacttcct 250
 gagtacgtca tcccagttca ttatgatctc ttgatccatg caaaccttac 300
 cacgctgacc ttctggggaa ccacgaaagt agaaatcaca gccagtcagc 350
 ccaccagcac catcatcctg catagtcacc acctgcagat atctagggcc 400
 accctcagga agggagctgg agagaggcta tcggaagaac ccctgcaggt 450
 cctggaacac cccctcagg agcaaattgc actgctggct cccgagcccc 500
 tccttgctcg gctcccgta acagttgtca ttcactatgc tggcaatctt 550
 tcggagactt tccacggatt ttacaaaagc acctacagaa ccaaggaagg 600
 ggaactgagg atactagcat caacacaatt tgaaccocact gcagctagaa 650
 tggcctttcc ctgctttgat gaacctgcct tcaaagcaag tttctcaatc 700
 aaaattagaa gagagccaag gcacctagcc atctccaata tgccattggt 750
 gaaatctgtg actgttgctg aaggactcat agaagacat tttgatgtca 800
 ctgtgaagat gagcacctat ctgggtggcct tcatcatttc agattttgag 850
 tctgtcagca agataaccaa gagtggagtc aaggtttctg tttatgctgt 900
 gccagacaag ataaatcaag cagattatgc actggatgct gcgggtgactc 950
 ttctagaatt ttatgaggat tatttcagca taccgtatcc cctacccaaa 1000
 caagatcttg ctgctattcc cgactttcag tctggtgcta tggaaaactg 1050
 gggactgaca acatatagag aatctgctct gttgtttgat gcagaaaagt 1100
 cttctgcata aagtaagctt ggcatcacag tgactgtggc coatgaactg 1150
 gccaccaggt ggtttgggaa cctggtcact atggaatggt ggaatgatct 1200
 ttggctaaat gaaggatttg ccaaatttat ggagtttgtg tctgtcagtg 1250
 tgacccatcc tgaactgaaa gttggagatt atttcttttg caaatgtttt 1300

gacgcaatgg aggtagatgc tttaaattcc tcacaccctg tgtctacacc 1350
tgtggaaaat cctgctcaga tccgggagat gtttgatgat gtttcttatg 1400
ataagggagc ttgtattctg aatatgctaa gggagtatct tagcgtgac 1450
gcatttaaaa gtggtattgt acagtatctc cagaagcata gctataaaaa 1500
tacaaaaaac gaggacctgt gggatagtat ggcaagtatt tgccctacag 1550
atggtgtaaa agggatggat ggcttttgct ctagaagtca acattcatct 1600
tcctcctcac attggcatca ggaaggggtg gatgtgaaaa ccatgatgaa 1650
catttgaca ctgcagagg gttttcccct aataaccatc acagtgagg 1700
ggaggaatgt acacatgaag caagagcact acatgaagg ctctgacggc 1750
gccccggaca ctgggtacct gtggcatgtt ccattgacat tcatcaccag 1800
caaatccaac atgggtccatc gatttttgct aaaaacaaa acagatgtgc 1850
tcctcctccc agaagagggtg gaatggatca aatttaatgt gggcatgaat 1900
ggctattaca ttgtgcatta cgaggatgat ggatgggact ctttgactgg 1950
ccttttaaaa ggaacacaca cagcagtcag cagtaatgat cgggcaagtc 2000
tcattaacaa tgcatttcag ctgctcagca ttgggaagct gtccattgaa 2050
aaggccttgg atttatccct gtacttgaac catgaaactg aaattatgcc 2100
cgtgtttcaa ggtttgaatg agctgattcc tatgtataag ttaatggaga 2150
aaagagatat gaatgaagt gaaactcaat tcaaggcctt cctcatcagg 2200
ctgctaaggg acctcattga taagcagaca tggacagacg agggctcagt 2250
ctcagagcaa atgctgcgga gtgaactact actcctcgcc tgtgtgcaca 2300
actatcagcc gtgctgacag agggcagaag gctatttcag aaagtggaag 2350
gaatccaatg gaaacttgag cctgcctgtc gacgtgacct tggcagtgtt 2400
tgctgtgggg gccagagca cagaaggctg ggattttctt tatagtaaat 2450
atcagttttc ttgtgtcagt actgagaaaa gccaaattga atttgccctc 2500
tgcagaacct aaaataagga aaagcttcaa tggctactag atgaaagctt 2550
taaggagat aaaataaaaa ctcaggagtt tccacaaatt cttacactca 2600
ttggcaggaa ccagtagga taccactgg cctggcaatt tctgaggaaa 2650
aactggaaca aacttgtaca aaagtttgaa cttggctcat cttccatagc 2700
ccacatggta atgggtacaa caaatcaatt ctccacaaga acacggcttg 2750
aagaggtaaa aggattcttc agctctttga aagaaaatg ttctcagctc 2800
cgttgtgtcc aacagacaat tgaaccatt gaagaaaaca tcggttgat 2850
ggataagaat ttgataaaa tcagagtgtg gctgcaaagt gaaaagcttg 2900

aacgtatgta aaaattcctc ccttgcccggt ttcctgttat ctctaatacac 2950
 caacattttg ttgagtgtat tttcaaacta gagatggctg ttttggctcc 3000
 aactggagat acttttttcc cttcaactca ttttttgact atccctgtga 3050
 aaagaatagc tgttagtttt tcatgaatgg gctttttcat gaatgggcta 3100
 tgcgtacat gtgttttgtt catcacaggt gttgcctgc aacgtaaacc 3150
 caagtgttgg gttccctgcc acagaagaat aaagtacott attcttctca 3200
 aaaaaaaaaa aaaaaaaaaa aaaaaa 3226

<210> 353
 <211> 941
 <212> PRT
 <213> Homo sapiens

<400> 353
 Met Val Phe Leu Pro Leu Lys Trp Ser Leu Ala Thr Met Ser Phe
 1 5 10 15
 Leu Leu Ser Ser Leu Leu Ala Leu Leu Thr Val Ser Thr Pro Ser
 20 25 30
 Trp Cys Gln Ser Thr Glu Ala Ser Pro Lys Arg Ser Asp Gly Thr
 35 40 45
 Pro Phe Pro Trp Asn Lys Ile Arg Leu Pro Glu Tyr Val Ile Pro
 50 55 60
 Val His Tyr Asp Leu Leu Ile His Ala Asn Leu Thr Thr Leu Thr
 65 70 75
 Phe Trp Gly Thr Thr Lys Val Glu Ile Thr Ala Ser Gln Pro Thr
 80 85 90
 Ser Thr Ile Ile Leu His Ser His His Leu Gln Ile Ser Arg Ala
 95 100 105
 Thr Leu Arg Lys Gly Ala Gly Glu Arg Leu Ser Glu Glu Pro Leu
 110 115 120
 Gln Val Leu Glu His Pro Pro Gln Glu Gln Ile Ala Leu Leu Ala
 125 130 135
 Pro Glu Pro Leu Leu Val Gly Leu Pro Tyr Thr Val Val Ile His
 140 145 150
 Tyr Ala Gly Asn Leu Ser Glu Thr Phe His Gly Phe Tyr Lys Ser
 155 160 165
 Thr Tyr Arg Thr Lys Glu Gly Glu Leu Arg Ile Leu Ala Ser Thr
 170 175 180
 Gln Phe Glu Pro Thr Ala Ala Arg Met Ala Phe Pro Cys Phe Asp
 185 190 195
 Glu Pro Ala Phe Lys Ala Ser Phe Ser Ile Lys Ile Arg Arg Glu
 200 205 210
 Pro Arg His Leu Ala Ile Ser Asn Met Pro Leu Val Lys Ser Val

	215	220	225
Thr Val Ala Glu Gly	Leu Ile Glu Asp	His Phe Asp Val Thr	Val
	230	235	240
Lys Met Ser Thr Tyr	Leu Val Ala Phe	Ile Ile Ser Asp Phe	Glu
	245	250	255
Ser Val Ser Lys Ile	Thr Lys Ser Gly	Val Lys Val Ser Val	Tyr
	260	265	270
Ala Val Pro Asp Lys	Ile Asn Gln Ala	Asp Tyr Ala Leu Asp	Ala
	275	280	285
Ala Val Thr Leu Leu	Glu Phe Tyr Glu	Asp Tyr Phe Ser Ile	Pro
	290	295	300
Tyr Pro Leu Pro Lys	Gln Asp Leu Ala	Ala Ile Pro Asp Phe	Gln
	305	310	315
Ser Gly Ala Met Glu	Asn Trp Gly Leu	Thr Thr Tyr Arg Glu	Ser
	320	325	330
Ala Leu Leu Phe Asp	Ala Glu Lys Ser	Ser Ala Ser Ser Lys	Leu
	335	340	345
Gly Ile Thr Val Thr	Val Ala His Glu	Leu Ala His Gln Trp	Phe
	350	355	360
Gly Asn Leu Val Thr	Met Glu Trp Trp	Asn Asp Leu Trp Leu	Asn
	365	370	375
Glu Gly Phe Ala Lys	Phe Met Glu Phe	Val Ser Val Ser Val	Thr
	380	385	390
His Pro Glu Leu Lys	Val Gly Asp Tyr	Phe Phe Gly Lys Cys	Phe
	395	400	405
Asp Ala Met Glu Val	Asp Ala Leu Asn	Ser Ser His Pro Val	Ser
	410	415	420
Thr Pro Val Glu Asn	Pro Ala Gln Ile	Arg Glu Met Phe Asp	Asp
	425	430	435
Val Ser Tyr Asp Lys	Gly Ala Cys Ile	Leu Asn Met Leu Arg	Glu
	440	445	450
Tyr Leu Ser Ala Asp	Ala Phe Lys Ser	Gly Ile Val Gln Tyr	Leu
	455	460	465
Gln Lys His Ser Tyr	Lys Asn Thr Lys	Asn Glu Asp Leu Trp	Asp
	470	475	480
Ser Met Ala Ser Ile	Cys Pro Thr Asp	Gly Val Lys Gly Met	Asp
	485	490	495
Gly Phe Cys Ser Arg	Ser Gln His Ser	Ser Ser Ser Ser His	Trp
	500	505	510
His Gln Glu Gly Val	Asp Val Lys Thr	Met Met Asn Thr Trp	Thr
	515	520	525
Leu Gln Arg Gly Phe	Pro Leu Ile Thr	Ile Thr Val Arg Gly	Arg

530										535					540			
Asn	Val	His	Met	Lys	Gln	Glu	His	Tyr	Met	Lys	Gly	Ser	Asp	Gly				
				545					550					555				
Ala	Pro	Asp	Thr	Gly	Tyr	Leu	Trp	His	Val	Pro	Leu	Thr	Phe	Ile				
				560					565					570				
Thr	Ser	Lys	Ser	Asn	Met	Val	His	Arg	Phe	Leu	Leu	Lys	Thr	Lys				
				575					580					585				
Thr	Asp	Val	Leu	Ile	Leu	Pro	Glu	Glu	Val	Glu	Trp	Ile	Lys	Phe				
				590					595					600				
Asn	Val	Gly	Met	Asn	Gly	Tyr	Tyr	Ile	Val	His	Tyr	Glu	Asp	Asp				
				605					610					615				
Gly	Trp	Asp	Ser	Leu	Thr	Gly	Leu	Leu	Lys	Gly	Thr	His	Thr	Ala				
				620					625					630				
Val	Ser	Ser	Asn	Asp	Arg	Ala	Ser	Leu	Ile	Asn	Asn	Ala	Phe	Gln				
				635					640					645				
Leu	Val	Ser	Ile	Gly	Lys	Leu	Ser	Ile	Glu	Lys	Ala	Leu	Asp	Leu				
				650					655					660				
Ser	Leu	Tyr	Leu	Lys	His	Glu	Thr	Glu	Ile	Met	Pro	Val	Phe	Gln				
				665					670					675				
Gly	Leu	Asn	Glu	Leu	Ile	Pro	Met	Tyr	Lys	Leu	Met	Glu	Lys	Arg				
				680					685					690				
Asp	Met	Asn	Glu	Val	Glu	Thr	Gln	Phe	Lys	Ala	Phe	Leu	Ile	Arg				
				695					700					705				
Leu	Leu	Arg	Asp	Leu	Ile	Asp	Lys	Gln	Thr	Trp	Thr	Asp	Glu	Gly				
				710					715					720				
Ser	Val	Ser	Glu	Gln	Met	Leu	Arg	Ser	Glu	Leu	Leu	Leu	Leu	Ala				
				725					730					735				
Cys	Val	His	Asn	Tyr	Gln	Pro	Cys	Val	Gln	Arg	Ala	Glu	Gly	Tyr				
				740					745					750				
Phe	Arg	Lys	Trp	Lys	Glu	Ser	Asn	Gly	Asn	Leu	Ser	Leu	Pro	Val				
				755					760					765				
Asp	Val	Thr	Leu	Ala	Val	Phe	Ala	Val	Gly	Ala	Gln	Ser	Thr	Glu				
				770					775					780				
Gly	Trp	Asp	Phe	Leu	Tyr	Ser	Lys	Tyr	Gln	Phe	Ser	Leu	Ser	Ser				
				785					790					795				
Thr	Glu	Lys	Ser	Gln	Ile	Glu	Phe	Ala	Leu	Cys	Arg	Thr	Gln	Asn				
				800					805					810				
Lys	Glu	Lys	Leu	Gln	Trp	Leu	Leu	Asp	Glu	Ser	Phe	Lys	Gly	Asp				
				815					820					825				
Lys	Ile	Lys	Thr	Gln	Glu	Phe	Pro	Gln	Ile	Leu	Thr	Leu	Ile	Gly				
				830					835					840				
Arg	Asn	Pro	Val	Gly	Tyr	Pro	Leu	Ala	Trp	Gln	Phe	Leu	Arg	Lys				

	845		850		855
Asn Trp Asn Lys	Leu Val Gln Lys Phe	Glu Leu Gly Ser Ser Ser			
	860		865		870
Ile Ala His Met	Val Met Gly Thr Thr	Asn Gln Phe Ser Thr Arg			
	875		880		885
Thr Arg Leu Glu	Glu Val Lys Gly Phe	Phe Ser Ser Leu Lys Glu			
	890		895		900
Asn Gly Ser Gln	Leu Arg Cys Val Gln	Gln Thr Ile Glu Thr Ile			
	905		910		915
Glu Glu Asn Ile	Gly Trp Met Asp Lys	Asn Phe Asp Lys Ile Arg			
	920		925		930
Val Trp Leu Gln	Ser Glu Lys Leu Glu	Arg Met			
	935		940		

<210> 354
 <211> 1587
 <212> DNA
 <213> Homo sapiens

<400> 354
 cagccacaga cgggtcatga gcgcggtatt actgctggcc ctcttgggggt 50
 tcctctccc actgccagga gtgcaggcgc tgctctgcc gtttgggaca 100
 gttcagcatg tgtggaaggt gtccgacct ccccggaat ggacccctaa 150
 gaacaccagc tgcgacagcg gcttgggggtg ccaggacacg ttgatgctca 200
 ttgagagcgg accccaagtg agcctggtgc tctccaaggg ctgcacggag 250
 gccaaaggacc aggagccccg cgtcactgag caccggatgg gccccggcct 300
 ctccctgatc tcctacacct tcgtgtgccg ccaggaggac ttctgcaaca 350
 acctcgtaa ctccctccc ctttggggcc cacagcccc agcagaccca 400
 ggatccttga ggtgccaggt ctgcttgtct atggaaggct gtctggaggg 450
 gacaacagaa gagatctgcc ccaaggggac cacacactgt tatgatggcc 500
 tcctcaggct caggggagga ggcattctt ccaatctgag agtccaggga 550
 tgcattcccc agccaggttg caacctgctc aatgggacac aggaaattgg 600
 gcccggtgggt atgactgaga actgcaatag gaaagatttt ctgacctgtc 650
 atcggggggac caccattatg acacacggaa acttgggtca agaaccact 700
 gattggacca catcgaatac cgagatgtgc gaggtggggc aggtgtgtca 750
 ggagacgctg ctgctcatag atgtaggact cacatcaacc ctggtgggga 800
 caaaaggctg cagcactgtt ggggtctaaa attcccagaa gaccaccatc 850
 cactcagccc ctcttgggggt gcttgtggcc tcctataccc acttctgtct 900
 ctcggaacctg tgcaatagtg ccagcagcag cagcgttctg ctgaactccc 950

tccctcctca agctgcccc gtcccaggag accggcagtg tccctacctgt 1000
 gtgcagcccc ttggaacctg ttcaagtggc tccccccgaa tgacctgccc 1050
 caggggcgcc actcattgtt atgatgggta cattcatctc tcaggagggtg 1100
 ggctgtccac caaaatgagc attcagggtc gcgtggccca accttccagc 1150
 ttcttgttga accacaccag acaaatcggg atcttctctg cgcgtgagaa 1200
 gcgtgatgtg cagcctcctg cctctcagca tgaggagggt ggggctgagg 1250
 gcctggagtc tctcacttgg ggggtggggc tggcactggc cccagcgctg 1300
 tgggtggggag tggtttgccc ttctgctaa ctctattacc cccacgattc 1350
 ttcaccgctg ctgaccaccc aactcaacc tccctctgac ctcataacct 1400
 aatggccttg gacaccagat tctttcccat tctgtccatg aatcatcttc 1450
 cccacacaca atcattcata tctactcacc taacagcaac actggggaga 1500
 gcctggagca tccggacttg ccctatggga gaggggagc tggaggagtg 1550
 gctgcatgta tctgataata cagaccctgt cctttca 1587

<210> 355

<211> 437

<212> PRT

<213> Homo sapiens

<400> 355

Met	Ser	Ala	Val	Leu	Leu	Ala	Leu	Leu	Gly	Phe	Ile	Leu	Pro	1	5	10	15
Leu	Pro	Gly	Val	Gln	Ala	Leu	Leu	Cys	Gln	Phe	Gly	Thr	Val	Gln	20	25	30
His	Val	Trp	Lys	Val	Ser	Asp	Leu	Pro	Arg	Gln	Trp	Thr	Pro	Lys	35	40	45
Asn	Thr	Ser	Cys	Asp	Ser	Gly	Leu	Gly	Cys	Gln	Asp	Thr	Leu	Met	50	55	60
Leu	Ile	Glu	Ser	Gly	Pro	Gln	Val	Ser	Leu	Val	Leu	Ser	Lys	Gly	65	70	75
Cys	Thr	Glu	Ala	Lys	Asp	Gln	Glu	Pro	Arg	Val	Thr	Glu	His	Arg	80	85	90
Met	Gly	Pro	Gly	Leu	Ser	Leu	Ile	Ser	Tyr	Thr	Phe	Val	Cys	Arg	95	100	105
Gln	Glu	Asp	Phe	Cys	Asn	Asn	Leu	Val	Asn	Ser	Leu	Pro	Leu	Trp	110	115	120
Ala	Pro	Gln	Pro	Pro	Ala	Asp	Pro	Gly	Ser	Leu	Arg	Cys	Pro	Val	125	130	135
Cys	Leu	Ser	Met	Glu	Gly	Cys	Leu	Glu	Gly	Thr	Thr	Glu	Glu	Ile	140	145	150
Cys	Pro	Lys	Gly	Thr	Thr	His	Cys	Tyr	Asp	Gly	Leu	Leu	Arg	Leu			

	155	160	165
Arg Gly Gly Gly Ile Phe Ser Asn Leu	Arg Val Gln Gly Cys Met		
170	175	180	
Pro Gln Pro Gly Cys Asn Leu Leu Asn	Gly Thr Gln Glu Ile Gly		
185	190	195	
Pro Val Gly Met Thr Glu Asn Cys Asn	Arg Lys Asp Phe Leu Thr		
200	205	210	
Cys His Arg Gly Thr Thr Ile Met Thr	His Gly Asn Leu Ala Gln		
215	220	225	
Glu Pro Thr Asp Trp Thr Thr Ser Asn	Thr Glu Met Cys Glu Val		
230	235	240	
Gly Gln Val Cys Gln Glu Thr Leu Leu	Leu Ile Asp Val Gly Leu		
245	250	255	
Thr Ser Thr Leu Val Gly Thr Lys Gly	Cys Ser Thr Val Gly Ala		
260	265	270	
Gln Asn Ser Gln Lys Thr Thr Ile His	Ser Ala Pro Pro Gly Val		
275	280	285	
Leu Val Ala Ser Tyr Thr His Phe Cys	Ser Ser Asp Leu Cys Asn		
290	295	300	
Ser Ala Ser Ser Ser Ser Val Leu Leu	Asn Ser Leu Pro Pro Gln		
305	310	315	
Ala Ala Pro Val Pro Gly Asp Arg Gln	Cys Pro Thr Cys Val Gln		
320	325	330	
Pro Leu Gly Thr Cys Ser Ser Gly Ser	Pro Arg Met Thr Cys Pro		
335	340	345	
Arg Gly Ala Thr His Cys Tyr Asp Gly	Tyr Ile His Leu Ser Gly		
350	355	360	
Gly Gly Leu Ser Thr Lys Met Ser Ile	Gln Gly Cys Val Ala Gln		
365	370	375	
Pro Ser Ser Phe Leu Leu Asn His Thr	Arg Gln Ile Gly Ile Phe		
380	385	390	
Ser Ala Arg Glu Lys Arg Asp Val Gln	Pro Pro Ala Ser Gln His		
395	400	405	
Glu Gly Gly Gly Ala Glu Gly Leu Glu	Ser Leu Thr Trp Gly Val		
410	415	420	
Gly Leu Ala Leu Ala Pro Ala Leu Trp	Trp Gly Val Val Cys Pro		
425	430	435	

Ser Cys

<210> 356
 <211> 1238
 <212> DNA
 <213> Homo sapiens

```

<400> 356
gcgacgggca ggacgccccg ttgccttagc gcgtgctcag gagttggtgt 50
cctgcctgcg ctcaggatga gggggaatct ggccctggtg ggcgttctaa 100
tcagcctggc cttcctgtca ctgctgccat ctggacatcc tcagcoggct 150
ggcgatgacg cctgctctgt gcagatcctc gtccctggcc tcaaagggga 200
tgcgggagag aaggagaca aaggcgcccc cgacggcctt ggaagagtgc 250
gccccacggg agaaaaagga gacatggggg acaaaggaca gaaaggcagt 300
gtgggtcgtc atggaaaaat tgggtccatt ggctctaaag gtgagaaagg 350
agattccggt gacataggac cccctggtcc taatggagaa ccaggcctcc 400
catgtgagtg cagccagctg cgcaaggcca tcggggagat ggacaaccag 450
gtctctcagc tgaccagcga gctcaagttc atcaagaatg ctgtcgccgg 500
tgtgcgcgag acggagagca agatctacct gctggtgaag gaggagaagc 550
gctacgcgga cgcccagctg tcctgccagg gccgcggggg cacgctgagc 600
atgcccagg acgaggctgc caatggcctg atggccgcac acctggcgca 650
agccggcctg gcccggtgtc tcctcgccat caacgacctg gagaaggagg 700
gcgcccttct gtactctgac cactcccca tcgggacctt caacaagtgg 750
cgcagcggtg agcccaacaa tgcctacgac gaggaggact gcgtggagat 800
ggtggcctcg ggcggtgga acgacgtggc ctgccacacc accatgtact 850
tcattgtgtg gtttgacaag gagaacatgt gagcctcagg ctggggctgc 900
ccattggggg ccccatatgt cctgcaggg ttggcaggga cagagcccag 950
accatggtgc cagccaggga gctgtccctc tgtgaagggt ggaggctcac 1000
tgagtagagg gctgttgtct aaactgagaa aatggcctat gcttaagagg 1050
aaaatgaaag tgttcctggg gtgctgtctc tgaagaagca gagtttcatt 1100
acctgtattg tagcccaat gtcattatgt aattattacc cagaattgct 1150
cttcataaaa gcttgtgcct ttgtccaagc tatacaataa aatctttaag 1200
tagtgcagta gttaagtcca aaaaaaaaaa aaaaaaaaaa 1238

```

```

<210> 357
<211> 271
<212> PRT
<213> Homo sapiens

```

```

<400> 357
Met Arg Gly Asn Leu Ala Leu Val Gly Val Leu Ile Ser Leu Ala
 1             5             10            15
Phe Leu Ser Leu Leu Pro Ser Gly His Pro Gln Pro Ala Gly Asp
          20            25            30

```

Asp	Ala	Cys	Ser	Val	Gln	Ile	Leu	Val	Pro	Gly	Leu	Lys	Gly	Asp	
				35					40					45	
Ala	Gly	Glu	Lys	Gly	Asp	Lys	Gly	Ala	Pro	Gly	Arg	Pro	Gly	Arg	
				50					55					60	
Val	Gly	Pro	Thr	Gly	Glu	Lys	Gly	Asp	Met	Gly	Asp	Lys	Gly	Gln	
				65					70					75	
Lys	Gly	Ser	Val	Gly	Arg	His	Gly	Lys	Ile	Gly	Pro	Ile	Gly	Ser	
				80					85					90	
Lys	Gly	Glu	Lys	Gly	Asp	Ser	Gly	Asp	Ile	Gly	Pro	Pro	Gly	Pro	
				95					100					105	
Asn	Gly	Glu	Pro	Gly	Leu	Pro	Cys	Glu	Cys	Ser	Gln	Leu	Arg	Lys	
				110					115					120	
Ala	Ile	Gly	Glu	Met	Asp	Asn	Gln	Val	Ser	Gln	Leu	Thr	Ser	Glu	
				125					130					135	
Leu	Lys	Phe	Ile	Lys	Asn	Ala	Val	Ala	Gly	Val	Arg	Glu	Thr	Glu	
				140					145					150	
Ser	Lys	Ile	Tyr	Leu	Leu	Val	Lys	Glu	Glu	Lys	Arg	Tyr	Ala	Asp	
				155					160					165	
Ala	Gln	Leu	Ser	Cys	Gln	Gly	Arg	Gly	Gly	Thr	Leu	Ser	Met	Pro	
				170					175					180	
Lys	Asp	Glu	Ala	Ala	Asn	Gly	Leu	Met	Ala	Ala	Tyr	Leu	Ala	Gln	
				185					190					195	
Ala	Gly	Leu	Ala	Arg	Val	Phe	Ile	Gly	Ile	Asn	Asp	Leu	Glu	Lys	
				200					205					210	
Glu	Gly	Ala	Phe	Val	Tyr	Ser	Asp	His	Ser	Pro	Met	Arg	Thr	Phe	
				215					220					225	
Asn	Lys	Trp	Arg	Ser	Gly	Glu	Pro	Asn	Asn	Ala	Tyr	Asp	Glu	Glu	
				230					235					240	
Asp	Cys	Val	Glu	Met	Val	Ala	Ser	Gly	Gly	Trp	Asn	Asp	Val	Ala	
				245					250					255	
Cys	His	Thr	Thr	Met	Tyr	Phe	Met	Cys	Glu	Phe	Asp	Lys	Glu	Asn	
				260					265					270	

Met

<210> 358
 <211> 972
 <212> DNA
 <213> Homo sapiens

<400> 358
 agtgactgca gccttcctag atcccctcca ctcggtttct ctctttgcag 50
 gagcaccggc agcaccagtg tgtgagggga gcaggcagcg gtcctagcca 100
 gttccttgat cctgccagac caccagccc ccggcacaga gctgctccac 150

aggcaccatg aggatcatgc tgctattcac agccatcctg gccttcagcc 200
 tagctcagag ctttggggct gtctgtaagg agccacagga ggaggtgggt 250
 cctggcgggg gccgcagcaa gagggatcca gatctctacc agctgctcca 300
 gagactcttc aaaagccact catctctgga gggattgctc aaagccctga 350
 gccaggctag cacagatcct aaggaatcaa catctcccga gaaacgtgac 400
 atgcatgact tctttgtggg acttatgggc aagaggagcg tccagccaga 450
 gggaaagaca ggacctttct taccttcagt gagggttcct cggccccttc 500
 atcccaatca gcttgatcc acaggaaagt cttccctggg aacagaggag 550
 cagagacctt tataagactc tcctacggat gtgaatcaag agaacgtccc 600
 cagctttggc atcctcaagt atcccccag agcagaatag gtactccact 650
 tccggactcc tggactgcat taggaagacc tctttccctg tcccaatccc 700
 caggtgcgca cgctcctggt accctttctc ttccctgttc ttgtaacatt 750
 cttgtgcttt gactccttct ccacttttct tacctgaccc tgggtgtggaa 800
 actgcatagt gaatatcccc aacccaatg ggcattgact gtagaatacc 850
 ctagagttcc tgtagtgtcc tacattaaaa atataatgtc tctctctatt 900
 cctcaacaat aaaggatttt tgcatatgaa aaaaaaaaaa aaaaaaaaaa 950
 aaaaaaaaaa aaaaaaaaaa aa 972

<210> 359

<211> 135

<212> PRT

<213> Homo sapiens

<400> 359

Met	Arg	Ile	Met	Leu	Leu	Phe	Thr	Ala	Ile	Leu	Ala	Phe	Ser	Leu	1	5	10	15
Ala	Gln	Ser	Phe	Gly	Ala	Val	Cys	Lys	Glu	Pro	Gln	Glu	Glu	Val	20	25	30	
Val	Pro	Gly	Gly	Gly	Arg	Ser	Lys	Arg	Asp	Pro	Asp	Leu	Tyr	Gln	35	40	45	
Leu	Leu	Gln	Arg	Leu	Phe	Lys	Ser	His	Ser	Ser	Leu	Glu	Gly	Leu	50	55	60	
Leu	Lys	Ala	Leu	Ser	Gln	Ala	Ser	Thr	Asp	Pro	Lys	Glu	Ser	Thr	65	70	75	
Ser	Pro	Glu	Lys	Arg	Asp	Met	His	Asp	Phe	Phe	Val	Gly	Leu	Met	80	85	90	
Gly	Lys	Arg	Ser	Val	Gln	Pro	Glu	Gly	Lys	Thr	Gly	Pro	Phe	Leu	95	100	105	
Pro	Ser	Val	Arg	Val	Pro	Arg	Pro	Leu	His	Pro	Asn	Gln	Leu	Gly	110	115	120	

Ser Thr Gly Lys Ser Ser Leu Gly Thr Glu Glu Gln Arg Pro Leu
125 130 135

<210> 360
<211> 1738
<212> DNA
<213> Homo sapiens

<400> 360
gggcgtctcc ggctgctcct attgagctgt ctgctcgctg tgcccgtctg 50
gcctgctgtg cccgcgtctg cgcgctgct accgcgtctg ctggacgcgg 100
gagacgccag cgagctggtg attggagccc tgcggagagc tcaagcggcc 150
agctctgccc caggagccca ggctgccccg tgagtcccat agttgctgca 200
ggagtggagc catgagctgc gtccctgggtg gtgtcatccc cttggggctg 250
ctgttcctgg tctgcggatc ccaaggctac ctctgcccc acgtcactct 300
cttagaggag ctgctcagca aataccagca caacgagtct cactcccggg 350
tccgcagagc catccccagg gaggacaagg aggagatcct catgctgcac 400
aacaagcttc ggggccaggt gcagcctcag gcctccaaca tggagtacat 450
ggtgagcgcc ggctccggcc gcagaggctg gcaccggggg tggggcctgg 500
gccaccagcc tgctctgttc ccagccagc tctgttcccc agccagtgcg 550
tgtgatggct ggctcagggt ctccctctggc aggggaggat cccggctctg 600
ttctgttttg tttgtttgtt ttgagacagg gtctcactct gccactgacg 650
ctggagtgca atggcacaat cgtcatgccc tgaaacctta gactcccggg 700
gttaagcgat cctgcttcag cctcccaagt agctggaact acaggcatgc 750
accatgggtg ccagctagat tttaaatatt ttgtggagat gggggtcttg 800
ctacgttgcc caggctggtc ttgaactcct aggcctcaagc aatcctcctg 850
cctcagcctc tcaaagtgtc aggattatag gcatgagtca ccctgtctgg 900
ctctggctct gttcttaaca ttctgccaaa acaacacaag tgggttcctt 950
gtgcagagcc tgcctcgttg ccttcatgtc actcttggtg gctccactgg 1000
gaacacagct ctcagccttt ccacctgga ggcagagtgg ggaggggccc 1050
agggctgggc tttgctgatg ctgatctcag ctgtgccaca cgctagctgc 1100
accaccctga cttctcctta gcccggtgta gcctcacttt ccacttgag 1150
agtccttcct cgcgtgggtg ccatgactgt gagataagtc gaggctgtga 1200
agggcccgcc acagactgac ctgcctcccc aaccctagg ctttgctaac 1250
cgggaaagga gctaacggtg acagaagaca gccaaaggtc accctcccgg 1300
gtgattgtga tgggtgttcc aggtgtgggt gggcgatgct gctacttgac 1350

cccaagctcc agtgtggaaa ctctcttctt ggctggtttt ccagaactac 1400
 agaggaatgg accacagtct tccaggggtcc ctctctgtcc accaaccggg 1450
 agcctccacc ttggccatcc gtcagctatg aatggctttt taaacaaacc 1500
 cacgtcccag cctgggtaac atggtaaagc cccgtctcta caaaaaaatc 1550
 caagttagcc gggcatgggtg gtgcgcacct gtagtcccag ctgcagtggg 1600
 actgaggtgg aggtggaggt ggggggtggg agctgaggaa ggaggatcgc 1650
 ttgagcctgg gaagtcgagg ctgcagtgag ctgagattgc accactgcac 1700
 tccagcctgg gtgacagagc aagaccctgt ctcaaaaa 1738

<210> 361

<211> 159

<212> PRT

<213> Homo sapiens

<400> 361

Met	Ser	Cys	Val	Leu	Gly	Gly	Val	Ile	Pro	Leu	Gly	Leu	Leu	Phe
1				5					10					15
Leu	Val	Cys	Gly	Ser	Gln	Gly	Tyr	Leu	Leu	Pro	Asn	Val	Thr	Leu
				20				25						30
Leu	Glu	Glu	Leu	Leu	Ser	Lys	Tyr	Gln	His	Asn	Glu	Ser	His	Ser
				35				40						45
Arg	Val	Arg	Arg	Ala	Ile	Pro	Arg	Glu	Asp	Lys	Glu	Glu	Ile	Leu
				50				55						60
Met	Leu	His	Asn	Lys	Leu	Arg	Gly	Gln	Val	Gln	Pro	Gln	Ala	Ser
				65				70						75
Asn	Met	Glu	Tyr	Met	Val	Ser	Ala	Gly	Ser	Gly	Arg	Arg	Gly	Trp
				80				85						90
His	Arg	Gly	Trp	Gly	Leu	Gly	His	Gln	Pro	Ala	Leu	Phe	Pro	Ser
				95				100						105
Gln	Leu	Cys	Ser	Pro	Ala	Ser	Ala	Cys	Asp	Gly	Trp	Leu	Arg	Val
				110				115						120
Ser	Ser	Gly	Arg	Gly	Gly	Ser	Arg	Leu	Cys	Ser	Val	Leu	Phe	Val
				125				130						135
Cys	Phe	Glu	Thr	Gly	Ser	His	Ser	Ala	Thr	Asp	Ala	Gly	Val	Gln
				140				145						150
Trp	His	Asn	Arg	His	Ala	Leu	Lys	Pro						
				155										

<210> 362

<211> 422

<212> DNA

<213> Homo sapiens

<400> 362

aaggagaggc caccgggact tcaagtgtctc ctccatccca ggagcgcagt 50

ggccactatg ggggtctgggc tgcccccttgt cctcctcttg accctccttg 100
gcagctcaca tggaacaggg ccgggtatga ctttgcaact gaagctgaag 150
gagtcttttc tgacaaattc ctccatagag tccagcttcc tggaattgct 200
tgaaaagctc tgcctcctcc tccatctccc ttcagggacc agcgtcaccc 250
tccaccatgc aagatctcaa caccatgttg tctgcaacac atgacagcca 300
ttgaagcctg tgtccttctt ggcccgggct tttgggccgg ggatgcagga 350
ggcaggcccc gaccctgtct ttcagcaggc cccaccctc ctgagtggca 400
ataaataaaa ttcggtatgc tg 422

<210> 363

<211> 78

<212> PRT

<213> Homo sapiens

<400> 363

Met	Gly	Ser	Gly	Leu	Pro	Leu	Val	Leu	Leu	Leu	Thr	Leu	Leu	Gly
1				5					10					15
Ser	Ser	His	Gly	Thr	Gly	Pro	Gly	Met	Thr	Leu	Gln	Leu	Lys	Leu
				20					25					30
Lys	Glu	Ser	Phe	Leu	Thr	Asn	Ser	Ser	Tyr	Glu	Ser	Ser	Phe	Leu
				35					40					45
Glu	Leu	Leu	Glu	Lys	Leu	Cys	Leu	Leu	Leu	His	Leu	Pro	Ser	Gly
				50					55					60
Thr	Ser	Val	Thr	Leu	His	His	Ala	Arg	Ser	Gln	His	His	Val	Val
				65					70					75

Cys Asn Thr

<210> 364

<211> 826

<212> DNA

<213> Homo sapiens

<400> 364

aattgtatct gtgtaatgtt aaaacaaacg aaataaaata gaaggaaaaa 50
ctttctgagt ttcaaaaaca acagactagt actctaaaga actcttttaa 100
acaattaact gttaggattg cagttatgat tggatattat ttaattctgt 150
ttctgatgtg gggttcctcc actgtgttct gtgtgctatt aatatttacc 200
attgcagaag cttcattcag tgttgaaaat gaatgcttag tggatctgtg 250
cctcttacgc atatgttaca aattatctgg agttcctaata caatgcagag 300
ttcccctccc ctccgattgt tctaaataat tgaaagatgt ctgctgtgga 350
aaaaggcatg tattttaaata tgtatgattc tcaaccatct ttagttggga 400
aaggtccttg aaagccaatg gaaatacttt ttttttttct tggcactaat 450

caagtgagtg ttaccttttc acttagtagg atgtgttggt acgctagtaa 500
 aatagaaacc tgtgttttatt ctcagggtatt ttagaaacaa cagccatcat 550
 tttatttttat gtgtgtgttc ttggctgtat tcataaatta tatattttgg 600
 gctatcaaat attacttcat tcaatataaa taacaatagt agaagttggt 650
 tacttagata tgctttctag ttgcattttc tcagcctatg taagactact 700
 ttgttgaat agcctttgaa atttacagta ctgtctctct actatcttca 750
 gattacttga ttcaaataaa ccaattatgt ttgtaattga tattaataaa 800
 accagaataa aagttcatat ctaccc 826

<210> 365
 <211> 67
 <212> PRT
 <213> Homo sapiens

<400> 365
 Met Ile Gly Tyr Tyr Leu Ile Leu Phe Leu Met Trp Gly Ser Ser
 1 5 10 15
 Thr Val Phe Cys Val Leu Leu Ile Phe Thr Ile Ala Glu Ala Ser
 20 25 30
 Phe Ser Val Glu Asn Glu Cys Leu Val Asp Leu Cys Leu Leu Arg
 35 40 45
 Ile Cys Tyr Lys Leu Ser Gly Val Pro Asn Gln Cys Arg Val Pro
 50 55 60
 Leu Pro Ser Asp Cys Ser Lys
 65

<210> 366
 <211> 2475
 <212> DNA
 <213> Homo sapiens

<400> 366
 gaggatttgc cacagcagcg gatagagcag gagagcacca ccggagccct 50
 tgagacatcc ttgagaagag ccacagcata agagaactgcc ctgcttggtg 100
 ttttgcagga tgatggtggc ccttcgagga gcttctgcat tgctggttct 150
 gttccttgca gcttttctgc ccccgccgca gtgtaccag gaccagcca 200
 tgggtgcatta catctaccag cgctttcgag tcttgagca agggctggaa 250
 aaatgtaccc aagcaacgag ggcatacatt caagaattcc aagagttctc 300
 aaaaaatata tctgtcatgc tgggaagatg tcagacctac acaagtgagt 350
 acaagagtgc agtgggtaac ttggcactga gagttgaacg tgcccaacgg 400
 gagattgact acatacaata ccttcgagag gctgaogagt gcatcgtatc 450
 agaggacaag aactggcag aaatgttgct ccaagaagct gaagaagaga 500

aaaagatccg gactctgctg aatgcaagct gtgacaacat gctgatgggc 550
 ataaagtctt tgaaaatagt gaagaagatg atggacacac atggctcttg 600
 gatgaaagat gctgtctata actctccaaa ggtgtactta ttaattggat 650
 ccagaaacaa cactgtttgg gaatttgcaa acatacgggc attcatggag 700
 gataacacca agccagctcc ccggaagcaa atcctaacac tttcctggca 750
 ggggaacaggc caagtgatct acaaaggttt tctatTTTTT cataaccaag 800
 caacttctaa tgagataatc aaatataacc tgcagaagag gactgtggaa 850
 gatcgaatgc tgctcccagg aggggtaggc cgagcattgg tttaccagca 900
 ctccccctca acttacattg acctggctgt ggatgagcat gggctctggg 950
 ccatccactc tgggccaggc acccatagcc atttggttct cacaaagatt 1000
 gagccgggca cactgggagt ggagcattca tgggataccc catgcagaag 1050
 ccaggatgct gaagcctcat tcctcttggtg tggggttctc tatgtggtct 1100
 acagtactgg gggccagggc cctcatcgca tcacctgcat ctatgatcca 1150
 ctgggcacta tcagtgagga ggacttgccc aacttgttct tccccagag 1200
 accaagaagt cactccatga tccattacaa cccagagat aagcagctct 1250
 atgcctggaa tgaaggaaac cagatcattt acaaactcca gacaaagaga 1300
 aagctgcctc tgaagtaatg cattacagct gtgagaaaga gcaactgtggc 1350
 tttggcagct gttctacagg acagtgaggc tatagcccct tcacaatata 1400
 gtatccctct aatcacacac aggaagagtg tgtagaagtg gaaatacgta 1450
 tgccctcttt cccaaatgtc actgccttag gtatcttcca agagcttaga 1500
 tgagagcata tcatcaggaa agtttcaaca atgtocatta ctccccaaa 1550
 cctcctggct ctcaaggatg accacattct gatacagcct acttcaagcc 1600
 ttttgtttta ctgctcccca gcatttactg taactctgcc atcttccctc 1650
 ccacaattag agttgtatgc cagcccctaa tattcaccac tggcttttct 1700
 ctcccctggc ctttgctgaa gctcttccct ctttttcaaa tgtctattga 1750
 tattctccca ttttactgc ccaactaaaa tactattaat atttctttct 1800
 tttcttttct tttttttag acaaggctc actatggtgc ccaggctggg 1850
 ctcaaactcc agagctcaag agatcctcct gcctcagcct cctaagtacc 1900
 tgggattaca ggcatgtgcc accacacctg gcttaaaata ctatttctta 1950
 ttgaggttta acctctattt cccttagccc tgtccttcca ctaagcttgg 2000
 tagatgtaat aataaagtga aaatattaac atttgaatat cgctttccag 2050
 gtgtggagtg tttgcacatc attgaattct cgtttcacct ttgtgaaaca 2100

tgcacaagtc ttacagctg tcattctaga gtttaggtga gtaacacaat 2150
 tacaaagtga aagatacagc tagaaaatac tacaaatccc atagtttttc 2200
 cattgcccaa ggaagcatca aatacgtatg tttgttcacc tactcttata 2250
 gtcaatgcgt tcatcgtttc agcctaaaaa taatagtctg tcccttttagc 2300
 cagttttcat gtctgcacaa gacctttcaa taggcctttc aaatgataat 2350
 tcctccagaa aaccagtcta agggtagagga ccccaactct agcctcctct 2400
 tgtcttgctg tcctctgttt ctctctttct gctttaaatt caataaaagt 2450
 gacactgagc aaaaaaaaaa aaaaa 2475

<210> 367

<211> 402

<212> PRT

<213> Homo sapiens

<400> 367

Met	Met	Val	Ala	Leu	Arg	Gly	Ala	Ser	Ala	Leu	Leu	Val	Leu	Phe	1	5	10	15
Leu	Ala	Ala	Phe	Leu	Pro	Pro	Pro	Gln	Cys	Thr	Gln	Asp	Pro	Ala	20	25	30	
Met	Val	His	Tyr	Ile	Tyr	Gln	Arg	Phe	Arg	Val	Leu	Glu	Gln	Gly	35	40	45	
Leu	Glu	Lys	Cys	Thr	Gln	Ala	Thr	Arg	Ala	Tyr	Ile	Gln	Glu	Phe	50	55	60	
Gln	Glu	Phe	Ser	Lys	Asn	Ile	Ser	Val	Met	Leu	Gly	Arg	Cys	Gln	65	70	75	
Thr	Tyr	Thr	Ser	Glu	Tyr	Lys	Ser	Ala	Val	Gly	Asn	Leu	Ala	Leu	80	85	90	
Arg	Val	Glu	Arg	Ala	Gln	Arg	Glu	Ile	Asp	Tyr	Ile	Gln	Tyr	Leu	95	100	105	
Arg	Glu	Ala	Asp	Glu	Cys	Ile	Val	Ser	Glu	Asp	Lys	Thr	Leu	Ala	110	115	120	
Glu	Met	Leu	Leu	Gln	Glu	Ala	Glu	Glu	Glu	Lys	Lys	Ile	Arg	Thr	125	130	135	
Leu	Leu	Asn	Ala	Ser	Cys	Asp	Asn	Met	Leu	Met	Gly	Ile	Lys	Ser	140	145	150	
Leu	Lys	Ile	Val	Lys	Lys	Met	Met	Asp	Thr	His	Gly	Ser	Trp	Met	155	160	165	
Lys	Asp	Ala	Val	Tyr	Asn	Ser	Pro	Lys	Val	Tyr	Leu	Leu	Ile	Gly	170	175	180	
Ser	Arg	Asn	Asn	Thr	Val	Trp	Glu	Phe	Ala	Asn	Ile	Arg	Ala	Phe	185	190	195	
Met	Glu	Asp	Asn	Thr	Lys	Pro	Ala	Pro	Arg	Lys	Gln	Ile	Leu	Thr	200	205	210	

Leu	Ser	Trp	Gln	Gly	Thr	Gly	Gln	Val	Ile	Tyr	Lys	Gly	Phe	Leu	
				215					220					225	
Phe	Phe	His	Asn	Gln	Ala	Thr	Ser	Asn	Glu	Ile	Ile	Lys	Tyr	Asn	
				230					235					240	
Leu	Gln	Lys	Arg	Thr	Val	Glu	Asp	Arg	Met	Leu	Leu	Pro	Gly	Gly	
				245					250					255	
Val	Gly	Arg	Ala	Leu	Val	Tyr	Gln	His	Ser	Pro	Ser	Thr	Tyr	Ile	
				260					265					270	
Asp	Leu	Ala	Val	Asp	Glu	His	Gly	Leu	Trp	Ala	Ile	His	Ser	Gly	
				275					280					285	
Pro	Gly	Thr	His	Ser	His	Leu	Val	Leu	Thr	Lys	Ile	Glu	Pro	Gly	
				290					295					300	
Thr	Leu	Gly	Val	Glu	His	Ser	Trp	Asp	Thr	Pro	Cys	Arg	Ser	Gln	
				305					310					315	
Asp	Ala	Glu	Ala	Ser	Phe	Leu	Leu	Cys	Gly	Val	Leu	Tyr	Val	Val	
				320					325					330	
Tyr	Ser	Thr	Gly	Gly	Gln	Gly	Pro	His	Arg	Ile	Thr	Cys	Ile	Tyr	
				335					340					345	
Asp	Pro	Leu	Gly	Thr	Ile	Ser	Glu	Glu	Asp	Leu	Pro	Asn	Leu	Phe	
				350					355					360	
Phe	Pro	Lys	Arg	Pro	Arg	Ser	His	Ser	Met	Ile	His	Tyr	Asn	Pro	
				365					370					375	
Arg	Asp	Lys	Gln	Leu	Tyr	Ala	Trp	Asn	Glu	Gly	Asn	Gln	Ile	Ile	
				380					385					390	
Tyr	Lys	Leu	Gln	Thr	Lys	Arg	Lys	Leu	Pro	Leu	Lys				
				395					400						

<210> 368
 <211> 2281
 <212> DNA
 <213> Homo sapiens

<400> 368
 gggcgccgc gtactcacta gctgagggtgg cagtgggttcc accaacatgg 50
 agctctcgca gatgtcggag ctcatggggc tgtcgggtgtt gcttggggtg 100
 ctggccctga tggcgacggc ggcggtagcg cgggggtggc tgcgcgcggg 150
 ggaggagagg agcggccggc ccgcctgccaaaagcaaat ggatttccac 200
 ctgacaaatc ttccgggatcc aagaagcaga aacaatatca gcggattcgg 250
 aaggagaagc ctcaacaaca caacttcacc caccgcctcc tggctgcagc 300
 tctgaagagc cacagcggga acatatcttg catggacttt agcagcaatg 350
 gcaaatacct ggctacctgt gcagatgac gcaccatccg catctggagc 400
 accaaggact tcctgcagcg agagcaccgc agcatgagag ccaacgtgga 450

gctggaccac gccaccctgg tgcgcttcag ccctgaactgc agagccttca 500
 tcgtctggct ggccaacggg gacaccctcc gtgtcttcaa gatgaccaag 550
 cgggaggatg ggggctacac cttcacagcc accccagagg acttccctaa 600
 aaagcacaag gcgcctgtca tcgacattgg cattgctaac acaggggaagt 650
 ttatcatgac tgcctccagt gacaccactg tcctcatctg gagcctgaag 700
 ggtcaagtgc tgtctaccat caacaccaac cagatgaaca acacacacgc 750
 tgctgtatct ccctgtggca gatttgtagc ctogtgtggc ttcaccccag 800
 atgtgaaggt ttgggaagtc tgctttggaa agaaggggga gttccaggag 850
 gtggtgcgag ccttcgaact aaagggccac tccgcggctg tgcactcgtt 900
 tgctttctcc aacgactcac ggaggatggc ttctgtctcc aaggatggta 950
 catggaaact gtgggacaca gatgtggaat acaagaagaa gcaggacccc 1000
 tacttgctga agacaggccg ctttgaagag gcggcggtg ccgcgccgtg 1050
 ccgcctggcc ctctcccca acgcccaggc cttggccttg gccagtggca 1100
 gtagtattca tctctacaat acccgcgggg gcgagaagga ggagtgcctt 1150
 gagcgggtcc atggcgagt gtatcgccaac ttgtcctttg acatcactgg 1200
 ccgctttctg gcctcctgtg gggaccgggc ggtgcggctg tttcacaaca 1250
 ctctggcca ccgagccatg gtggaggaga tgcaggcca cctgaagcgg 1300
 gcctccaacg agagcaccgc ccagaggctg cagcagcagc tgaccaggc 1350
 ccaagagacc ctgaagagcc tgggtgccct gaagaagtga ctctgggagg 1400
 gcccggcgca gaggattgag gaggagggat ctggcctcct catggcactg 1450
 ctgccatctt tcctcccagg tggaagcctt tcagaaggag tctcctgggt 1500
 ttcttactgg tggcctgtct tcttccatt gaaactactc ttgtctactt 1550
 aggtctctct cttcttgctg gctgtgactc ctccctgact agtggccaag 1600
 gtgcttttct tcctcccagg ccagtggtt ggaatctgtc ccacactggc 1650
 actgaggaga atggtagaga ggagaggaga gagagagaga atgtgatttt 1700
 tggccttgtg gcagcacatc ctcacacca aagaagtgtg taaatgttcc 1750
 agaacaacct agagaacacc tgagtactaa gcagcagttt tgcaaggatg 1800
 ggagactggg atagcttccc atcacagaac tgtgttccat caaaaagaca 1850
 ctaagggatt tccttctggg cctcagttct atttgaaga tggagaataa 1900
 tcctctctgt gaactccttg caaagatgat atgaggctaa gagaatatca 1950
 agtccccagg tctggaagaa aagtagaaaa gagtagtact attgtccaat 2000
 gtcatgaaag tggtaaaagt gggaaccagt gtgctttgaa accaaattag 2050

aaacacattc cttgggaagg caaagttttc tgggacttga tcatacatit 2100
 tatatggttg ggactttctct cttcgggaga tgatatcttg ttttaaggaga 2150
 cctctttttca gttcatcaag ttcacagat atttgagtgc ccactctgtg 2200
 cccaaataaa tatgagctgg ggattaaaaa aaaaaaaaaa aaaaaaaaaa 2250
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a 2281

<210> 369

<211> 447

<212> PRT

<213> Homo sapiens

<400> 369

Met	Glu	Leu	Ser	Gln	Met	Ser	Glu	Leu	Met	Gly	Leu	Ser	Val	Leu	
1				5					10					15	
Leu	Gly	Leu	Leu	Ala	Leu	Met	Ala	Thr	Ala	Ala	Val	Ala	Arg	Gly	
				20					25					30	
Trp	Leu	Arg	Ala	Gly	Glu	Glu	Arg	Ser	Gly	Arg	Pro	Ala	Cys	Gln	
				35					40					45	
Lys	Ala	Asn	Gly	Phe	Pro	Pro	Asp	Lys	Ser	Ser	Gly	Ser	Lys	Lys	
				50					55					60	
Gln	Lys	Gln	Tyr	Gln	Arg	Ile	Arg	Lys	Glu	Lys	Pro	Gln	Gln	His	
				65					70					75	
Asn	Phe	Thr	His	Arg	Leu	Leu	Ala	Ala	Ala	Leu	Lys	Ser	His	Ser	
				80					85					90	
Gly	Asn	Ile	Ser	Cys	Met	Asp	Phe	Ser	Ser	Asn	Gly	Lys	Tyr	Leu	
				95					100					105	
Ala	Thr	Cys	Ala	Asp	Asp	Arg	Thr	Ile	Arg	Ile	Trp	Ser	Thr	Lys	
				110					115					120	
Asp	Phe	Leu	Gln	Arg	Glu	His	Arg	Ser	Met	Arg	Ala	Asn	Val	Glu	
				125					130					135	
Leu	Asp	His	Ala	Thr	Leu	Val	Arg	Phe	Ser	Pro	Asp	Cys	Arg	Ala	
				140					145					150	
Phe	Ile	Val	Trp	Leu	Ala	Asn	Gly	Asp	Thr	Leu	Arg	Val	Phe	Lys	
				155					160					165	
Met	Thr	Lys	Arg	Glu	Asp	Gly	Gly	Tyr	Thr	Phe	Thr	Ala	Thr	Pro	
				170					175					180	
Glu	Asp	Phe	Pro	Lys	Lys	His	Lys	Ala	Pro	Val	Ile	Asp	Ile	Gly	
				185					190					195	
Ile	Ala	Asn	Thr	Gly	Lys	Phe	Ile	Met	Thr	Ala	Ser	Ser	Asp	Thr	
				200					205					210	
Thr	Val	Leu	Ile	Trp	Ser	Leu	Lys	Gly	Gln	Val	Leu	Ser	Thr	Ile	
				215					220					225	
Asn	Thr	Asn	Gln	Met	Asn	Asn	Thr	His	Ala	Ala	Val	Ser	Pro	Cys	
				230					235					240	

Gly	Arg	Phe	Val	Ala	Ser	Cys	Gly	Phe	Thr	Pro	Asp	Val	Lys	Val	245	250	255
Trp	Glu	Val	Cys	Phe	Gly	Lys	Lys	Gly	Glu	Phe	Gln	Glu	Val	Val	260	265	270
Arg	Ala	Phe	Glu	Leu	Lys	Gly	His	Ser	Ala	Ala	Val	His	Ser	Phe	275	280	285
Ala	Phe	Ser	Asn	Asp	Ser	Arg	Arg	Met	Ala	Ser	Val	Ser	Lys	Asp	290	295	300
Gly	Thr	Trp	Lys	Leu	Trp	Asp	Thr	Asp	Val	Glu	Tyr	Lys	Lys	Lys	305	310	315
Gln	Asp	Pro	Tyr	Leu	Leu	Lys	Thr	Gly	Arg	Phe	Glu	Glu	Ala	Ala	320	325	330
Gly	Ala	Ala	Pro	Cys	Arg	Leu	Ala	Leu	Ser	Pro	Asn	Ala	Gln	Val	335	340	345
Leu	Ala	Leu	Ala	Ser	Gly	Ser	Ser	Ile	His	Leu	Tyr	Asn	Thr	Arg	350	355	360
Arg	Gly	Glu	Lys	Glu	Glu	Cys	Phe	Glu	Arg	Val	His	Gly	Glu	Cys	365	370	375
Ile	Ala	Asn	Leu	Ser	Phe	Asp	Ile	Thr	Gly	Arg	Phe	Leu	Ala	Ser	380	385	390
Cys	Gly	Asp	Arg	Ala	Val	Arg	Leu	Phe	His	Asn	Thr	Pro	Gly	His	395	400	405
Arg	Ala	Met	Val	Glu	Glu	Met	Gln	Gly	His	Leu	Lys	Arg	Ala	Ser	410	415	420
Asn	Glu	Ser	Thr	Arg	Gln	Arg	Leu	Gln	Gln	Gln	Leu	Thr	Gln	Ala	425	430	435
Gln	Glu	Thr	Leu	Lys	Ser	Leu	Gly	Ala	Leu	Lys	Lys				440	445	

<210> 370
 <211> 1415
 <212> DNA
 <213> Homo sapiens

<400> 370
 tggcctcccc agcttgccag gcacaaggct gagcgggagg aagcgagagg 50
 catctaagca ggcagtgttt tgccttcacc ccaagtgacc atgagaggtg 100
 ccacgcgagt ctcaatcatg ctctcctag taactgtgtc tgactgtgct 150
 gtgatcacag gggcctgtga gcgggatgtc cagtgtgggg caggcacctg 200
 ctgtgccatc agcctgtggc ttcgagggct gcggatgtgc accccgctgg 250
 ggcgggaagg cgaggagtgc caccgccgca gccacaaggc ccccttcttc 300
 aggaaacgca agcaccacac ctgtccttgc ttgccaacc tgctgtgtc 350
 caggttcccg gacggcaggt accgctgctc catggacttg aagaacatca 400

atttttaggc gcttgccctgg tctcaggata cccaccatcc ttttcctgag 450
 cacagcctgg atttttatatt ctgccatgaa acccagctcc catgactctc 500
 ccagtcccta cactgactac cctgatctct cttgtctagt acgcacatat 550
 gcacacaggc agacatacct cccatcatga catgggtccc aggctggcct 600
 gaggatgtca cagcttgagg ctgtggtgtg aaaggtggcc agcctgggtc 650
 tcttcctgc tcaggctgcc agagaggtgg taaatggcag aaaggacatt 700
 cccctcccc tcccagggtg acctgctctc tttcctgggc cctgcccctc 750
 tccccacatg tatccctcgg tctgaattag acattcctgg gcacaggctc 800
 ttgggtgcat tgctcagagt cccaggctct ggctgaccc tcaggccctt 850
 cacgtgaggt ctgtgaggac caatttgtgg gtagttcatc ttccctcgat 900
 tggttaactc cttagtttca gaccacagac tcaagattgg ctcttccag 950
 agggcagcag acagtcaccc caaggcaggt gtagggagcc caggagggcc 1000
 aatcagcccc ctgaagactc tgggtcccagt cagcctgtgg cttgtggcct 1050
 gtgacctgtg accttctgcc agaattgtca tgctctgag gccccctctt 1100
 accacacttt accagttaac cactgaagcc cccaattccc acagcttttc 1150
 cattaaaatg caaatggtgg tggttcaatc taatctgata ttgacatatt 1200
 agaaggcaat tagggtgttt ccttaaaca ctcctttcca aggatcagcc 1250
 ctgagagcag gttggtgact ttgaggaggg cagtcctctg tccagattgg 1300
 ggtgggagca agggacaggg agcagggcag gggctgaaag gggcactgat 1350
 tcagaccagg gaggcaacta cacaccaaca tgctggcttt agaataaaag 1400
 caccaactga aaaaa 1415

<210> 371
 <211> 105
 <212> PRT
 <213> Homo sapiens

<400> 371
 Met Arg Gly Ala Thr Arg Val Ser Ile Met Leu Leu Leu Val Thr
 1 5 10 15
 Val Ser Asp Cys Ala Val Ile Thr Gly Ala Cys Glu Arg Asp Val
 20 25 30
 Gln Cys Gly Ala Gly Thr Cys Cys Ala Ile Ser Leu Trp Leu Arg
 35 40 45
 Gly Leu Arg Met Cys Thr Pro Leu Gly Arg Glu Gly Glu Glu Cys
 50 55 60
 His Pro Gly Ser His Lys Val Pro Phe Phe Arg Lys Arg Lys His
 65 70 75

His	Thr	Cys	Pro	Cys	Leu	Pro	Asn	Leu	Leu	Cys	Ser	Arg	Phe	Pro
				80					85					90
Asp	Gly	Arg	Tyr	Arg	Cys	Ser	Met	Asp	Leu	Lys	Asn	Ile	Asn	Phe
				95					100					105

<210> 372
 <211> 1281
 <212> DNA
 <213> Homo sapiens

<400> 372
 agcgcccggg cgtcggggcg gtaaaaggcc ggcagaaggg aggcacttga 50
 gaaatgtcctt tcctccagga cccaagtttc ttcacatg ggatgtgggc 100
 cattgggtgca ggagccctgg gggctgctgc cttggcattg ctgcttgcca 150
 acacagacgt gtttctgtcc aagccccaga aagcggccct ggagtacctg 200
 gaggatatag acctgaaaac actggagaag gaaccaagga ctttcaaagc 250
 aaaggagcta tgggaaaaaa atggagctgt gattatggcc gtgcggaggc 300
 caggctgttt cctctgtcga gaggaagctg cggatctgtc ctccctgaaa 350
 agcatgttgg accagctggg cgtccccctc tatgcagtgg taaaggagca 400
 catcaggact gaagtgaagg atttccagcc ttatttcaaa ggagaaatct 450
 tcctggatga aaagaaaaag ttctatgggc cacaaaggcg gaagatgatg 500
 tttatgggat ttatcgtctt gggagtgtgg tacaacttct tccgagcctg 550
 gaacggaggc ttctctggaa acctggaagg agaaggcttc atccttgggg 600
 gagttttcgt ggtgggatca ggaaagcagg gcattcttct tgagcaccga 650
 gaaaaagaat ttggagacaa agtaaaccta ctttctgttc tggaagctgc 700
 taagatgata aaaccacaga ctttggcctc agagaaaaaa tgattgtgtg 750
 aaactgcccc gctcagggat aaccaggac attcacctgt gttcatggga 800
 tgtattgttt ccactcgtgt ccctaaggag tgagaaacc atttatactc 850
 tactctcagt atggattatt aatgtatatt aatattctgt ttagggccac 900
 taaggcaaaa tagccccaaa acaagactga caaaaatctg aaaaactaat 950
 gaggattatt aagctaaaac ctgggaaata ggaggcttaa aattgactgc 1000
 caggctgggt gcagtggctc acacctgtaa tcccagcact ttgggaggcc 1050
 aaggtgagca agtcacttga ggtcgggagt tcgagaccag cctgagcaac 1100
 atggcgaaac cccgtctcta ctaaaaatac aaaaatcacc cgggtgtggg 1150
 ggcaggcacc tgtagtccca gctacccggg aggctgaggc aggagaatca 1200
 cttgaacctg ggaggtggag gttgcggtga gctgagatca caccactgta 1250
 ttccagcctg ggtgactgag actctaacta a 1281

<210> 373
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 373
 Met Ser Phe Leu Gln Asp Pro Ser Phe Phe Thr Met Gly Met Trp
 1 5 10 15
 Ser Ile Gly Ala Gly Ala Leu Gly Ala Ala Ala Leu Ala Leu Leu
 20 25 30
 Leu Ala Asn Thr Asp Val Phe Leu Ser Lys Pro Gln Lys Ala Ala
 35 40 45
 Leu Glu Tyr Leu Glu Asp Ile Asp Leu Lys Thr Leu Glu Lys Glu
 50 55 60
 Pro Arg Thr Phe Lys Ala Lys Glu Leu Trp Glu Lys Asn Gly Ala
 65 70 75
 Val Ile Met Ala Val Arg Arg Pro Gly Cys Phe Leu Cys Arg Glu
 80 85 90
 Glu Ala Ala Asp Leu Ser Ser Leu Lys Ser Met Leu Asp Gln Leu
 95 100 105
 Gly Val Pro Leu Tyr Ala Val Val Lys Glu His Ile Arg Thr Glu
 110 115 120
 Val Lys Asp Phe Gln Pro Tyr Phe Lys Gly Glu Ile Phe Leu Asp
 125 130 135
 Glu Lys Lys Lys Phe Tyr Gly Pro Gln Arg Arg Lys Met Met Phe
 140 145 150
 Met Gly Phe Ile Arg Leu Gly Val Trp Tyr Asn Phe Phe Arg Ala
 155 160 165
 Trp Asn Gly Gly Phe Ser Gly Asn Leu Glu Gly Glu Gly Phe Ile
 170 175 180
 Leu Gly Gly Val Phe Val Val Gly Ser Gly Lys Gln Gly Ile Leu
 185 190 195
 Leu Glu His Arg Glu Lys Glu Phe Gly Asp Lys Val Asn Leu Leu
 200 205 210
 Ser Val Leu Glu Ala Ala Lys Met Ile Lys Pro Gln Thr Leu Ala
 215 220 225
 Ser Glu Lys Lys

<210> 374
 <211> 744
 <212> DNA
 <213> Homo sapiens

<400> 374
 acggaccgag ggttcgaggg agggacacgg accaggaacc tgagctaggt 50
 caaagacgcc cgggccaggt gccccgtcgc aggtgcccct ggccggagat 100

gcggtaggag gggcgagcgc gagaagcccc ttcctoggcg ctgccaaccc 150
gccaccagc ccatggcgaa ccccgggctg gggctgcttc tggcgctggg 200
cctgccgttc ctgctggccc gctggggccg agcctggggg caaatacaga 250
ccacttctgc aaatgagaat agcactgttt tgccttcato caccagctcc 300
agctccgatg gcaacctgcg tccggaagcc atcactgcta tcatcgtggg 350
cttctccctc ttggctgcct tgcctcctggc tgtggggctg gcactgttgg 400
tgcggaagct tcgggagaag cggcagacgg agggcaccta ccggcccagt 450
agcgaggagc agttctccca tgcagccgag gcccgggccc ctcaggactc 500
caaggagacg gtgcagggct gcctgcccac ctaggtcccc tctcctgcat 550
ctgtctccct tcattgctgt gtgaccttgg ggaaaggcag tgccctctct 600
gggcagtcag atccaccag tgcttaatat cagggaagaa ggtacttcaa 650
agactctgcc cctgaggtca agagaggatg gggctattca cttttatata 700
tttatataaa attagtagtg agatgtaaaa aaaaaaaaaa aaaa 744

<210> 375

<211> 123

<212> PRT

<213> Homo sapiens

<400> 375

Met	Ala	Asn	Pro	Gly	Leu	Gly	Leu	Leu	Leu	Ala	Leu	Gly	Leu	Pro
1				5					10					15
Phe	Leu	Leu	Ala	Arg	Trp	Gly	Arg	Ala	Trp	Gly	Gln	Ile	Gln	Thr
				20					25					30
Thr	Ser	Ala	Asn	Glu	Asn	Ser	Thr	Val	Leu	Pro	Ser	Ser	Thr	Ser
				35					40					45
Ser	Ser	Ser	Asp	Gly	Asn	Leu	Arg	Pro	Glu	Ala	Ile	Thr	Ala	Ile
				50					55					60
Ile	Val	Val	Phe	Ser	Leu	Leu	Ala	Ala	Leu	Leu	Leu	Ala	Val	Gly
				65					70					75
Leu	Ala	Leu	Leu	Val	Arg	Lys	Leu	Arg	Glu	Lys	Arg	Gln	Thr	Glu
				80					85					90
Gly	Thr	Tyr	Arg	Pro	Ser	Ser	Glu	Glu	Gln	Phe	Ser	His	Ala	Ala
				95					100					105
Glu	Ala	Arg	Ala	Pro	Gln	Asp	Ser	Lys	Glu	Thr	Val	Gln	Gly	Cys
				110					115					120

Leu Pro Ile

<210> 376

<211> 713

<212> DNA

<213> Homo sapiens

<400> 376
aatatatcat ctatttatca ttaatcaata atgtattcct ttattccaat 50
aacatttggg ttttgggatt ttaattttca aacacagcag aatgacattt 100
tttctgtcac tattattatt gttggtatgt gaagctatct ggagatccaa 150
ttcaggaagc aacacattgg agaattggcta ctttctatca agaaataaag 200
agaaccacag tcaaccacac caatcatcct tagaagacag tgtgactcct 250
accaaagctg tcaaaaccac aggcaagggc atagttaaag gacggaatct 300
tgactcaaga ggggttaattc ttggtgctga agcctggggc aggggtgtaa 350
agaaaaacac ttagattcaa tgattgtaaa ttttaaggcaa atacacatat 400
tagtattacc ttagtgtaat gtatccctgt catatataca ataagggtgaa 450
attataagta ccctatgcag ttggctggac agttctaaat tggactttat 500
taatttttaa aatcagtaac tgatttatca ctggctatgt gcttagatct 550
acaggagatc atataatttg atacaaaataa aagaaaagtg ttctctcccc 600
ttacagaatt gacattttta atgcgataca gttagaatag gaaatatgac 650
attagaaagg aagaatgaca gggagaaagg aaagaaggga aaatgttgcc 700
aaggaaaaaa aaa 713

<210> 377
<211> 90
<212> PRT
<213> Homo sapiens

<400> 377
Met Thr Phe Phe Leu Ser Leu Leu Leu Leu Val Cys Glu Ala
1 5 10 15
Ile Trp Arg Ser Asn Ser Gly Ser Asn Thr Leu Glu Asn Gly Tyr
20 25 30
Phe Leu Ser Arg Asn Lys Glu Asn His Ser Gln Pro Thr Gln Ser
35 40 45
Ser Leu Glu Asp Ser Val Thr Pro Thr Lys Ala Val Lys Thr Thr
50 55 60
Gly Lys Gly Ile Val Lys Gly Arg Asn Leu Asp Ser Arg Gly Leu
65 70 75
Ile Leu Gly Ala Glu Ala Trp Gly Arg Gly Val Lys Lys Asn Thr
80 85 90

<210> 378
<211> 3265
<212> DNA
<213> Homo sapiens

<400> 378
gccaggaata actagagagg aacaatgggg ttattcagag gttttgtttt 50

cctcttagtt ctgtgcctgc tgcaccagtc aaatacttcc ttcattaagc 100
tgaataataa tggctttgaa gatattgtca ttgttataga tcctagtgtg 150
ccagaagatg aaaaaataat tgaacaaata gaggatatgg tgactacagc 200
ttctacgtac ctgtttgaag ccacagaaaa aagatttttt ttcaaaaatg 250
tatctatatt aattcctgag aattggaagg aaaatcctca gtacaaaagg 300
ccaaaacatg aaaaccataa acatgctgat gttatagttg caccacctac 350
actcccaggt agagatgaac catacaccaa gcagttcaca gaatgtggag 400
agaaaggcga atacattcac ttcacccctg accttctact tggaaaaaaa 450
caaatgaat atggaccacc aggcaaatg tttgtccatg agtgggctca 500
cctccggtgg ggagtgtttg atgagtacaa tgaagatcag cttttctacc 550
gtgctaagtc aaaaaaatc gaagcaacaa ggtgttccgc aggtatctct 600
ggtagaaata gattttataa gtgtcaagga ggcagctgtc ttagtagagc 650
atgcagaatt gattctacaa caaaactgta tggaaaagat tgtcaattct 700
ttcctgataa agtacaaaca gaaaaagcat ccataatgtt tatgcaaagt 750
attgattctg ttgttgaatt ttgtaacgaa aaaaccata atcaagaagc 800
tccaagccta caaacataa agtgcaattt tagaagtaca tgggaggtga 850
ttagcaattc tgaggatttt aaaaacacca taccatggg gacaccacct 900
cctccacctg tcttctcatt gctgaagatc agtcaaagaa ttgtgtgctt 950
agttcttgat aagtctggaa gcatgggggg taaggaccgc ctaaatcgaa 1000
tgaatcaagc agcaaacat ttcctgctgc agactgttga aaatggatcc 1050
tgggtgggga tgggttcactt tgatagtact gccactattg taaataagct 1100
aatccaaata aaaagcagtg atgaaagaaa cacactcatg gcaggattac 1150
ctacatatcc tctgggagga acttccatct gctctggaat taaatatgca 1200
tttcaggtga ttggagagct acattcccaa ctgatggat ccgaagtact 1250
gctgctgact gatggggagg ataacactgc aagttcttgt attgatgaag 1300
tgaaacaaag tggggccatt gttcatttta ttgctttggg aagagctgct 1350
gatgaagcag taatagagat gagcaagata acaggaggaa gtcattttta 1400
tgtttcagat gaagctcaga acaatggcct cattgatgct tttggggctc 1450
ttacatcagg aaatactgat ctctcccaga agtcccttca gctcgaaagt 1500
aagggattaa cactgaatag taatgcctgg atgaacgaca ctgtcataat 1550
tgatagtaca gtgggaaagg acacgttctt tctcatcaca tggaacagtc 1600
tgcctcccag tatttctctc tgggatccca gtggaacaat aatggaaaat 1650

ttcacagtgg atgcaacttc caaaatggcc tatctcagta ttccaggaac 1700
 tgcaaagggtg ggcacttggg catacaatct tcaagccaaa gcgaacccag 1750
 aaacattaac tattacagta acttctcgag cagcaaattc ttctgtgcct 1800
 ccaatcacag tgaatgctaa aatgaataag gacgtaaaca gtttccccag 1850
 cccaatgatt gtttacgcag aaattctaca aggatatgta cctgttcttg 1900
 gagccaatgt gactgctttc attgaatcac agaatggaca tacagaagtt 1950
 ttggaacttt tggataatgg tgcaggcgct gattctttca agaatgatgg 2000
 agtctactcc aggtatttta cagcatatac agaaaatggc agatatagct 2050
 taaaagttcg ggctcatgga ggagcaaaaca ctgccaggct aaaattacgg 2100
 cctccactga atagagccgc gtacatacca ggctgggtag tgaacgggga 2150
 aattgaagca aaccgcgcaa gacctgaaat tgatgaggat actcagacca 2200
 ccttgaggga tttcagccga acagcatccg gaggtgcatt tgtggtatca 2250
 caagtcccaa gccttccctt gcctgaccaa taccaccaa gtcaaatac 2300
 agaccttgat gccacagttc atgaggataa gattattctt acatggacag 2350
 caccaggaga taattttgat gttggaaaag ttcaacgtta tatcataaga 2400
 ataagtcaa gtattcttga tctaagagac agttttgatg atgctcttca 2450
 agtaaatact actgatctgt caccaaagga ggccaactcc aaggaaagct 2500
 ttgcatttaa accagaaaat atctcagaag aaaatgcaac ccacatatatt 2550
 attgccatta aaagtataga taaaagcaat ttgacatcaa aagtatccaa 2600
 cattgcacaa gtaactttgt ttatccctca agcaaatoct gatgacattg 2650
 atcttacacc tactcctact cctactccta ctctgataa aagtcataat 2700
 tctggagtta atatttctac gctggatttg tctgtgattg ggtctgttgt 2750
 aattgttaac tttattttaa gtaccacat ttgaacctta acgaagaaaa 2800
 aaatcttcaa gtagacctag aagagagttt taaaaaaca aacaatgtaa 2850
 gtaaaggata tttctgaatc ttaaaattca tcccatgtgt gatcataaac 2900
 tcataaaaat aattttaaga tgtcggaaaa ggatactttg attaaataaa 2950
 aacactcatg gatatgtaaa aactgtcaag attaaaattt aatagtttca 3000
 tttatttggt attttatttg taagaaatag tgatgaacaa agatcctttt 3050
 tcatactgat acctggttgt atattatttg atgcaacagt tttctgaaat 3100
 gatatttcaa attgcatcaa gaaattaaaa tcacttatct gagtagtcaa 3150
 aatacaagta aaggagagca aataaacaac atttggaata aaaaaaaaaa 3200
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3250

aaaaaaaaaa aaaaa 3265

<210> 379

<211> 919

<212> PRT

<213> Homo sapiens

<400> 379

Met	Gly	Leu	Phe	Arg	Gly	Phe	Val	Phe	Leu	Leu	Val	Leu	Cys	Leu
1				5					10					15
Leu	His	Gln	Ser	Asn	Thr	Ser	Phe	Ile	Lys	Leu	Asn	Asn	Asn	Gly
				20					25					30
Phe	Glu	Asp	Ile	Val	Ile	Val	Ile	Asp	Pro	Ser	Val	Pro	Glu	Asp
				35					40					45
Glu	Lys	Ile	Ile	Glu	Gln	Ile	Glu	Asp	Met	Val	Thr	Thr	Ala	Ser
				50					55					60
Thr	Tyr	Leu	Phe	Glu	Ala	Thr	Glu	Lys	Arg	Phe	Phe	Phe	Lys	Asn
				65					70					75
Val	Ser	Ile	Leu	Ile	Pro	Glu	Asn	Trp	Lys	Glu	Asn	Pro	Gln	Tyr
				80					85					90
Lys	Arg	Pro	Lys	His	Glu	Asn	His	Lys	His	Ala	Asp	Val	Ile	Val
				95					100					105
Ala	Pro	Pro	Thr	Leu	Pro	Gly	Arg	Asp	Glu	Pro	Tyr	Thr	Lys	Gln
				110					115					120
Phe	Thr	Glu	Cys	Gly	Glu	Lys	Gly	Glu	Tyr	Ile	His	Phe	Thr	Pro
				125					130					135
Asp	Leu	Leu	Leu	Gly	Lys	Lys	Gln	Asn	Glu	Tyr	Gly	Pro	Pro	Gly
				140					145					150
Lys	Leu	Phe	Val	His	Glu	Trp	Ala	His	Leu	Arg	Trp	Gly	Val	Phe
				155					160					165
Asp	Glu	Tyr	Asn	Glu	Asp	Gln	Pro	Phe	Tyr	Arg	Ala	Lys	Ser	Lys
				170					175					180
Lys	Ile	Glu	Ala	Thr	Arg	Cys	Ser	Ala	Gly	Ile	Ser	Gly	Arg	Asn
				185					190					195
Arg	Val	Tyr	Lys	Cys	Gln	Gly	Gly	Ser	Cys	Leu	Ser	Arg	Ala	Cys
				200					205					210
Arg	Ile	Asp	Ser	Thr	Thr	Lys	Leu	Tyr	Gly	Lys	Asp	Cys	Gln	Phe
				215					220					225
Phe	Pro	Asp	Lys	Val	Gln	Thr	Glu	Lys	Ala	Ser	Ile	Met	Phe	Met
				230					235					240
Gln	Ser	Ile	Asp	Ser	Val	Val	Glu	Phe	Cys	Asn	Glu	Lys	Thr	His
				245					250					255
Asn	Gln	Glu	Ala	Pro	Ser	Leu	Gln	Asn	Ile	Lys	Cys	Asn	Phe	Arg
				260					265					270
Ser	Thr	Trp	Glu	Val	Ile	Ser	Asn	Ser	Glu	Asp	Phe	Lys	Asn	Thr

	275		280		285
Ile Pro Met Val Thr	Pro Pro Pro Pro	Pro Val Phe Ser Leu	Leu		
	290		295		300
Lys Ile Ser Gln Arg	Ile Val Cys Leu	Val Leu Asp Lys Ser	Gly		
	305		310		315
Ser Met Gly Gly Lys	Asp Arg Leu Asn	Arg Met Asn Gln Ala	Ala		
	320		325		330
Lys His Phe Leu Leu	Gln Thr Val Glu	Asn Gly Ser Trp Val	Gly		
	335		340		345
Met Val His Phe Asp	Ser Thr Ala Thr	Ile Val Asn Lys Leu	Ile		
	350		355		360
Gln Ile Lys Ser Ser	Asp Glu Arg Asn	Thr Leu Met Ala Gly	Leu		
	365		370		375
Pro Thr Tyr Pro Leu	Gly Gly Thr Ser	Ile Cys Ser Gly Ile	Lys		
	380		385		390
Tyr Ala Phe Gln Val	Ile Gly Glu Leu	His Ser Gln Leu Asp	Gly		
	395		400		405
Ser Glu Val Leu Leu	Leu Thr Asp Gly	Glu Asp Asn Thr Ala	Ser		
	410		415		420
Ser Cys Ile Asp Glu	Val Lys Gln Ser	Gly Ala Ile Val His	Phe		
	425		430		435
Ile Ala Leu Gly Arg	Ala Ala Asp Glu	Ala Val Ile Glu Met	Ser		
	440		445		450
Lys Ile Thr Gly Gly	Ser His Phe Tyr	Val Ser Asp Glu Ala	Gln		
	455		460		465
Asn Asn Gly Leu Ile	Asp Ala Phe Gly	Ala Leu Thr Ser Gly	Asn		
	470		475		480
Thr Asp Leu Ser Gln	Lys Ser Leu Gln	Leu Glu Ser Lys Gly	Leu		
	485		490		495
Thr Leu Asn Ser Asn	Ala Trp Met Asn	Asp Thr Val Ile Ile	Asp		
	500		505		510
Ser Thr Val Gly Lys	Asp Thr Phe Phe	Leu Ile Thr Trp Asn	Ser		
	515		520		525
Leu Pro Pro Ser Ile	Ser Leu Trp Asp	Pro Ser Gly Thr Ile	Met		
	530		535		540
Glu Asn Phe Thr Val	Asp Ala Thr Ser	Lys Met Ala Tyr Leu	Ser		
	545		550		555
Ile Pro Gly Thr Ala	Lys Val Gly Thr	Trp Ala Tyr Asn Leu	Gln		
	560		565		570
Ala Lys Ala Asn Pro	Glu Thr Leu Thr	Ile Thr Val Thr Ser	Arg		
	575		580		585
Ala Ala Asn Ser Ser	Val Pro Pro Ile	Thr Val Asn Ala Lys	Met		

590					595					600				
Asn	Lys	Asp	Val	Asn	Ser	Phe	Pro	Ser	Pro	Met	Ile	Val	Tyr	Ala
				605					610					615
Glu	Ile	Leu	Gln	Gly	Tyr	Val	Pro	Val	Leu	Gly	Ala	Asn	Val	Thr
				620					625					630
Ala	Phe	Ile	Glu	Ser	Gln	Asn	Gly	His	Thr	Glu	Val	Leu	Glu	Leu
				635					640					645
Leu	Asp	Asn	Gly	Ala	Gly	Ala	Asp	Ser	Phe	Lys	Asn	Asp	Gly	Val
				650					655					660
Tyr	Ser	Arg	Tyr	Phe	Thr	Ala	Tyr	Thr	Glu	Asn	Gly	Arg	Tyr	Ser
				665					670					675
Leu	Lys	Val	Arg	Ala	His	Gly	Gly	Ala	Asn	Thr	Ala	Arg	Leu	Lys
				680					685					690
Leu	Arg	Pro	Pro	Leu	Asn	Arg	Ala	Ala	Tyr	Ile	Pro	Gly	Trp	Val
				695					700					705
Val	Asn	Gly	Glu	Ile	Glu	Ala	Asn	Pro	Pro	Arg	Pro	Glu	Ile	Asp
				710					715					720
Glu	Asp	Thr	Gln	Thr	Thr	Leu	Glu	Asp	Phe	Ser	Arg	Thr	Ala	Ser
				725					730					735
Gly	Gly	Ala	Phe	Val	Val	Ser	Gln	Val	Pro	Ser	Leu	Pro	Leu	Pro
				740					745					750
Asp	Gln	Tyr	Pro	Pro	Ser	Gln	Ile	Thr	Asp	Leu	Asp	Ala	Thr	Val
				755					760					765
His	Glu	Asp	Lys	Ile	Ile	Leu	Thr	Trp	Thr	Ala	Pro	Gly	Asp	Asn
				770					775					780
Phe	Asp	Val	Gly	Lys	Val	Gln	Arg	Tyr	Ile	Ile	Arg	Ile	Ser	Ala
				785					790					795
Ser	Ile	Leu	Asp	Leu	Arg	Asp	Ser	Phe	Asp	Asp	Ala	Leu	Gln	Val
				800					805					810
Asn	Thr	Thr	Asp	Leu	Ser	Pro	Lys	Glu	Ala	Asn	Ser	Lys	Glu	Ser
				815					820					825
Phe	Ala	Phe	Lys	Pro	Glu	Asn	Ile	Ser	Glu	Glu	Asn	Ala	Thr	His
				830					835					840
Ile	Phe	Ile	Ala	Ile	Lys	Ser	Ile	Asp	Lys	Ser	Asn	Leu	Thr	Ser
				845					850					855
Lys	Val	Ser	Asn	Ile	Ala	Gln	Val	Thr	Leu	Phe	Ile	Pro	Gln	Ala
				860					865					870
Asn	Pro	Asp	Asp	Ile	Asp	Pro	Thr	Pro	Thr	Pro	Thr	Pro	Thr	Pro
				875					880					885
Thr	Pro	Asp	Lys	Ser	His	Asn	Ser	Gly	Val	Asn	Ile	Ser	Thr	Leu
				890					895					900
Val	Leu	Ser	Val	Ile	Gly	Ser	Val	Val	Ile	Val	Asn	Phe	Ile	Leu

Ser Thr Thr Ile

<210> 380

<211> 3877

<212> DNA

<213> Homo sapiens

<400> 380

```
ctccttaggt ggaaaccctg ggagtagagt actgacagca aagaccggga 50
aagaccatac gtccccgggc aggggtgaca acaggtgtca tctttttgat 100
ctcgtgtgtg gctgccttcc tatttcaagg aaagacgcca aggtaatttt 150
gaccagagg agcaatgatg tagccacctc ctaaccttcc cttcttgaac 200
ccccagttat gccaggattt actagagagt gtcaactcaa ccagcaagcg 250
gctccttcgg cttaacttgt ggttggagga gagaaccttt gtggggctgc 300
gttctcttag cagtgtcag aagtgacttg cctgagggtg gaccagaaga 350
aaggaaaggt cccctcttgc tgttggctgc acatcaggaa ggctgtgatg 400
ggaatgaagg tgaaaacttg gagatttcac ttcagtcatt gcttctgcct 450
gcaagatcat cctttaaaag tagagaagct gctctgtgtg gtggttaact 500
ccaagaggca gaactcgttc tagaaggaaa tggatgcaag cagctccggg 550
ggcccaaac gcatgcttcc tgtggtctag ccaggggaag cccttccgtg 600
ggggcccg ctttgaggga tgccaccggt tctggacgca tggctgattc 650
ctgaatgatg atggttcgcc gggggctgct tgcgtggatt tcccgggtgg 700
tggttttgct ggtgctcctc tgctgtgcta tctctgtcct gtacatgttg 750
gcctgcaccc caaaaggatg agaggagcag ctggcactgc ccagggccaa 800
cagccccacg gggaaggagg ggtaccaggc cgtccttcag gagtgggagg 850
agcagcaccg caactacgtg agcagcctga agcggcagat cgcacagctc 900
aaggaggagc tgcaggagag gagtgagcag ctcaggaatg ggcagtacca 950
agccagcgat gctgctggcc tgggtctgga caggagcccc ccagagaaaa 1000
cccaggccga ctcctggcc ttcctgcact cgcagggtgga caaggcagag 1050
gtgaatgctg gcgtcaagct ggccacagag tatgcagcag tgcctttcga 1100
tagctttact ctacagaagg tgtaccagct ggagactggc cttaccgcc 1150
accccgagga gaagcctgtg aggaaggaca agcgggatga gttggtggaa 1200
gccattgaat cagccttga gaccctgaac aatcctgcag agaacagccc 1250
caatcaccgt ccttacacgg cctctgattt catagaaggg atctaccgaa 1300
```

cagaaagggg caaagggaca ttgtatgagc tcaccttcaa aggggaccac 1350
aaacacgaat tcaaacggct catcttattt cgaccattca gccccatcat 1400
gaaagtgaag aatgaaaagc tcaacatggc caacacgctt atcaatgtta 1450
tcgtgcctct agcaaaaagg gtggacaagt tccggcagtt catgcagaat 1500
ttcagggaga tgtgcattga gcaggatggg agagtccatc tcaactgttg 1550
ttactttggg aaagaagaaa taaatgaagt caaaggaata cttgaaaaca 1600
cttccaaagc tgccaacttc aggaacttta ccttcatcca gctgaatgga 1650
gaattttctc ggggaaaggg acttgatggt ggagcccgtc tctggaaggg 1700
aagcaacgtc cttctctttt tctgtgatgt ggacatctac ttcacatctg 1750
aattcctcaa tacgtgtagg ctgaatacac agccagggaa gaaggtattt 1800
tatccagttc ttttcagtca gtacaatcct ggcataatat acggccacca 1850
tgatgcagtc cctcccttgg aacagcagct ggtcataaag aaggaaactg 1900
gattttggag agactttgga tttgggatga cgtgtcagta tcggtcagac 1950
ttcatcaata taggtgggtt tgatctggac atcaaaggct ggggcggaga 2000
ggatgtgcac ctttatcgca agtatctcca cagcaacctc atagtggtag 2050
ggacgcctgt gcgaggactc ttccacctct ggcatgagaa gcgctgcatg 2100
gacgagctga ccccgagca gtacaagatg tgcattgcagt ccaaggccat 2150
gaacgaggca tcccacggcc agctgggcat gctggtgttc aggcacgaga 2200
tagaggctca ccttcgcaaa cagaaacaga agacaagtag caaaaaaaca 2250
tgaactccca gagaaggatt gtgggagaca ctttttcttt ccttttgcaa 2300
ttactgaaag tggctgcaac agagaaaaga cttccataaa ggacgacaaa 2350
agaattggac tgatgggtca gagatgagaa agcctccgat ttctctctgt 2400
tgggcttttt acaacagaaa tcaaaatctc cgctttgcct gcaaaagtaa 2450
cccagttgca ccctgtgaag tgtctgacaa aggcagaatg cttgtgagat 2500
tataagccta atggtgtgga ggttttgatg gtgtttacaa tacactgaga 2550
cctgttggtt tgtgtgctca ttgaaatatt catgatttaa gagcagtttt 2600
gtaaaaaatt cattagcatg aaaggcaagc atatttctoc tcatatgaat 2650
gagcctatca gcagggtctc agtttctagg aatgctaaaa tatcagaagg 2700
caggagagga gataggctta ttatgatact agtgagtaca ttaagtaaaa 2750
taaaatggac cagaaaagaa aagaaacat aaatatcgtg tcatattttc 2800
ccaagatta accaaaaata atctgcttat ctttttggtt gtccttttaa 2850
ctgtctccgt ttttttcttt tatttaaaaa tgcaactttt ttcccttggtg 2900

agttatagtc tgcttattta attaccactt tgcaagcctt acaagagagc 2950
 acaagttggc ctacattttt atatttttta agaagatact ttgagatgca 3000
 ttatgagaac tttcagttca aagcatcaaa ttgatgccat atccaaggac 3050
 atgccaaatg ctgattctgt caggcactga atgtcaggca ttgagacata 3100
 gggaaggaat ggtttgtact aatacagacg tacagatact ttctctgaag 3150
 agtattttcg aagaggagca actgaacact ggaggaaaag aaaatgacac 3200
 tttctgcttt acagaaaagg aaactcattc agactgggtga tatcgtgatg 3250
 tacctaaaag tcagaaacca cattttctcc tcagaagtag ggaccgcttt 3300
 cttacctgtt taaataaacc aaagtatacc gtgtgaacca aacaatctct 3350
 tttcaaaaca ggggtgctcct cctggcttct ggcttcata agaagaaatg 3400
 gagaaaaata tatatatata tatatatatt gtgaaagatc aatccatctg 3450
 ccagaatcta gtgggatgga agtttttgct acatgttata cccccaggc 3500
 cagggtggaag taactgaatt attttttaaa ttaagcagtt ctactcaatc 3550
 accaagatgc ttctgaaaat tgcattttat taccatttca aactattttt 3600
 taaaaataaa tacagttaac atagagtggg ttcttcattc atgtgaaaat 3650
 tattagccag caccagatgc atgagctaata tatctctttg agtccttgct 3700
 tctgtttgct cacagtaaac tcattgttta aaagcttcaa gaacattcaa 3750
 gctgttggtg tgtaaaaaaa tgcattgtat tgatttgtac tggtagttta 3800
 tgaaatttaa ttaaaacaca ggccatgaat ggaaggtggg attgcacagc 3850
 taataaaata tgatttgtgg atatgaa 3877

<210> 381
 <211> 532
 <212> PRT
 <213> Homo sapiens

<400> 381
 Met Met Met Val Arg Arg Gly Leu Leu Ala Trp Ile Ser Arg Val
 1 5 10 15
 Val Val Leu Leu Val Leu Leu Cys Cys Ala Ile Ser Val Leu Tyr
 20 25 30
 Met Leu Ala Cys Thr Pro Lys Gly Asp Glu Glu Gln Leu Ala Leu
 35 40 45
 Pro Arg Ala Asn Ser Pro Thr Gly Lys Glu Gly Tyr Gln Ala Val
 50 55 60
 Leu Gln Glu Trp Glu Glu Gln His Arg Asn Tyr Val Ser Ser Leu
 65 70 75
 Lys Arg Gln Ile Ala Gln Leu Lys Glu Glu Leu Gln Glu Arg Ser
 80 85 90

Glu Gln Leu Arg	Asn Gly Gln Tyr Gln	Ala Ser Asp Ala Ala Gly	95	100	105
Leu Gly Leu Asp	Arg Ser Pro Pro Glu	Lys Thr Gln Ala Asp Leu	110	115	120
Leu Ala Phe Leu	His Ser Gln Val Asp	Lys Ala Glu Val Asn Ala	125	130	135
Gly Val Lys Leu	Ala Thr Glu Tyr Ala	Ala Val Pro Phe Asp Ser	140	145	150
Phe Thr Leu Gln	Lys Val Tyr Gln Leu	Glu Thr Gly Leu Thr Arg	155	160	165
His Pro Glu Glu	Lys Pro Val Arg Lys	Asp Lys Arg Asp Glu Leu	170	175	180
Val Glu Ala Ile	Glu Ser Ala Leu Glu	Thr Leu Asn Asn Pro Ala	185	190	195
Glu Asn Ser Pro	Asn His Arg Pro Tyr	Thr Ala Ser Asp Phe Ile	200	205	210
Glu Gly Ile Tyr	Arg Thr Glu Arg Asp	Lys Gly Thr Leu Tyr Glu	215	220	225
Leu Thr Phe Lys	Gly Asp His Lys His	Glu Phe Lys Arg Leu Ile	230	235	240
Leu Phe Arg Pro	Phe Ser Pro Ile Met	Lys Val Lys Asn Glu Lys	245	250	255
Leu Asn Met Ala	Asn Thr Leu Ile Asn	Val Ile Val Pro Leu Ala	260	265	270
Lys Arg Val Asp	Lys Phe Arg Gln Phe	Met Gln Asn Phe Arg Glu	275	280	285
Met Cys Ile Glu	Gln Asp Gly Arg Val	His Leu Thr Val Val Tyr	290	295	300
Phe Gly Lys Glu	Glu Ile Asn Glu Val	Lys Gly Ile Leu Glu Asn	305	310	315
Thr Ser Lys Ala	Ala Asn Phe Arg Asn	Phe Thr Phe Ile Gln Leu	320	325	330
Asn Gly Glu Phe	Ser Arg Gly Lys Gly	Leu Asp Val Gly Ala Arg	335	340	345
Phe Trp Lys Gly	Ser Asn Val Leu Leu	Phe Phe Cys Asp Val Asp	350	355	360
Ile Tyr Phe Thr	Ser Glu Phe Leu Asn	Thr Cys Arg Leu Asn Thr	365	370	375
Gln Pro Gly Lys	Lys Val Phe Tyr Pro	Val Leu Phe Ser Gln Tyr	380	385	390
Asn Pro Gly Ile	Ile Tyr Gly His His	Asp Ala Val Pro Pro Leu	395	400	405

Glu	Gln	Gln	Leu	Val	Ile	Lys	Lys	Glu	Thr	Gly	Phe	Trp	Arg	Asp	
				410					415					420	
Phe	Gly	Phe	Gly	Met	Thr	Cys	Gln	Tyr	Arg	Ser	Asp	Phe	Ile	Asn	
				425					430					435	
Ile	Gly	Gly	Phe	Asp	Leu	Asp	Ile	Lys	Gly	Trp	Gly	Gly	Glu	Asp	
				440					445					450	
Val	His	Leu	Tyr	Arg	Lys	Tyr	Leu	His	Ser	Asn	Leu	Ile	Val	Val	
				455					460					465	
Arg	Thr	Pro	Val	Arg	Gly	Leu	Phe	His	Leu	Trp	His	Glu	Lys	Arg	
				470					475					480	
Cys	Met	Asp	Glu	Leu	Thr	Pro	Glu	Gln	Tyr	Lys	Met	Cys	Met	Gln	
				485					490					495	
Ser	Lys	Ala	Met	Asn	Glu	Ala	Ser	His	Gly	Gln	Leu	Gly	Met	Leu	
				500					505					510	
Val	Phe	Arg	His	Glu	Ile	Glu	Ala	His	Leu	Arg	Lys	Gln	Lys	Gln	
				515					520					525	
Lys	Thr	Ser	Ser	Lys	Lys	Thr									
				530											

<210> 382

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 382

ctcggggaaa gggacttgat gttgg 25

<210> 383

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 383

gcgaagggtga gcctctatct cgtgcc 26

<210> 384

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 384

cagcctacac gtattgagg 19

<210> 385

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 385

cagtcagtac aatcctggca taatatacgg ccaccatgat gcagtccc 48

<210> 386

<211> 1346

<212> DNA

<213> Homo sapiens

<400> 386

gaaagaatgt tgtggctgct cttttttctg gtgactgcca ttcattgctga 50
actctgtcaa ccagggtgcag aaaatgcttt taaagtgaga cttagtatca 100
gaacagctct gggagataaa gcatatgcct gggataccaa tgaagaatac 150
ctcttcaaag cgatggtagc tttctccatg agaaaagtgc ccaacagaga 200
agcaacagaa atttcccatg tctactttg caatgtaacc cagagggat 250
cattctgggt tgtgggttaca gacccttcaa aaaatcacac ccttctgct 300
gttgagggtgc aatcagccat aagaatgaac aagaaccgga tcaacaatgc 350
cttcttttcta aatgaccaa ctctggaatt tttaaaaatc ccttccacac 400
ttgcaccacc catggaccca tctgtgcca tctggattat tatatttgg 450
gtgatatttt gcatcatcat agttgcaatt gcactactga ttttatcagg 500
gatctggcaa cgtagaagaa agaacaaaga accatctgaa gtggatgacg 550
ctgaagataa gtgtgaaaac atgatcacia ttgaaaatgg catcccctct 600
gatcccctgg acatgaaggg gggcatatta atgatgcctt catgacagag 650
gatgagaggc tcaccctct ctgaagggt gttgttctgc ttcctcaaga 700
aattaaacat ttgtttctgt gtgactgctg agcatcctga aataccaaga 750
gcagatcata tattttgttt caccattctt cttttgtaat aaattttgaa 800
tgtgcttgaa agtgaaaagc aatcaattat acccaccia accactgaaa 850
tcataagcta ttcacgactc aaaatattct aaaatatttt tctgacagta 900
tagtgtataa atgtgggtcat gtggtatttg tagttattga ttttaagcatt 950
tttagaaata agatcaggca tatgtatata ttttcacact tcaaagacct 1000
aaggaaaaat aaattttcca gtggagaata catataatat ggtgtagaaa 1050
tcattgaaaa tggatccttt ttgacgatca cttatatcac tctgtatatg 1100
actaagtaaa caaaagttag aagtaattat tgtaaatgga tggataaaaa 1150
tggaattact catatacagg gtggaatttt atcctgttat cacaccaaca 1200
gttgattata tatttttctga atatcagccc ctaataggac aattctattt 1250

gttgaccatt tctacaattt gtaaaagtcc aatctgtgct aacttaataa 1300

agtaataatc atctcttttt aaaaaaaaaa aaaaaaaaaa aaaaaa 1346

<210> 387

<211> 212

<212> PRT

<213> Homo sapiens

<400> 387

Met	Leu	Trp	Leu	Leu	Phe	Phe	Leu	Val	Thr	Ala	Ile	His	Ala	Glu
1				5					10					15

Leu	Cys	Gln	Pro	Gly	Ala	Glu	Asn	Ala	Phe	Lys	Val	Arg	Leu	Ser
				20					25					30

Ile	Arg	Thr	Ala	Leu	Gly	Asp	Lys	Ala	Tyr	Ala	Trp	Asp	Thr	Asn
				35					40					45

Glu	Glu	Tyr	Leu	Phe	Lys	Ala	Met	Val	Ala	Phe	Ser	Met	Arg	Lys
				50					55					60

Val	Pro	Asn	Arg	Glu	Ala	Thr	Glu	Ile	Ser	His	Val	Leu	Leu	Cys
				65					70					75

Asn	Val	Thr	Gln	Arg	Val	Ser	Phe	Trp	Phe	Val	Val	Thr	Asp	Pro
				80					85					90

Ser	Lys	Asn	His	Thr	Leu	Pro	Ala	Val	Glu	Val	Gln	Ser	Ala	Ile
				95					100					105

Arg	Met	Asn	Lys	Asn	Arg	Ile	Asn	Asn	Ala	Phe	Phe	Leu	Asn	Asp
				110					115					120

Gln	Thr	Leu	Glu	Phe	Leu	Lys	Ile	Pro	Ser	Thr	Leu	Ala	Pro	Pro
				125					130					135

Met	Asp	Pro	Ser	Val	Pro	Ile	Trp	Ile	Ile	Ile	Phe	Gly	Val	Ile
				140					145					150

Phe	Cys	Ile	Ile	Ile	Val	Ala	Ile	Ala	Leu	Leu	Ile	Leu	Ser	Gly
				155					160					165

Ile	Trp	Gln	Arg	Arg	Arg	Lys	Asn	Lys	Glu	Pro	Ser	Glu	Val	Asp
				170					175					180

Asp	Ala	Glu	Asp	Lys	Cys	Glu	Asn	Met	Ile	Thr	Ile	Glu	Asn	Gly
				185					190					195

Ile	Pro	Ser	Asp	Pro	Leu	Asp	Met	Lys	Gly	Gly	Ile	Leu	Met	Met
				200					205					210

Pro Ser

<210> 388

<211> 1371

<212> DNA

<213> Homo sapiens

<400> 388

aactcaaact cctctctctg ggaaaacgcg gtgcttgctc ctcccggagt 50

ggcccttgga ggggtgttga gccctcggtc tgccccgtcc ggtctctggg 100
 gccaaaggctg gggtttccctc atgtatggca agagctctac tcgtgcggtg 150
 cttctttctcc ttggcataca gctcacagct ctttggccta tagcagctgt 200
 ggaaatztat acctcccggg tgctggaggc tgttaatggg acagatgctc 250
 gggttaaaatg cacttttctcc agctttgccc ctgtgggtga tgctctaaca 300
 gtgacctgga attttcgtcc tctagacggg ggacctgagc agtttgtatt 350
 ctactaccac atagatccct tccaacccat gagtgggcgg tttaaggacc 400
 ggggtgtcttg ggatgggaat cctgagcggg acgatgcctc catccttctc 450
 tggaaactgc agttcgacga caatgggaca tacacctgcc aggtgaagaa 500
 cccacctgat gttgatgggg tgatagggga gatccggctc agcgctcgtgc 550
 aactgtacg cttctctgag atccacttcc tggctctggc cattggctct 600
 gcctgtgcac tgatgatcat aatagtaatt gtagtggctc tcttccagca 650
 ttaccggaaa aagcgatggg ccgaaagagc tcataaagtg gtggagataa 700
 aatcaaaaga agaggaaagg ctcaaccaag agaaaaaggt ctctgtttat 750
 ttagaagaca cagactaaca attttagatg gaagctgaga tgatttccaa 800
 gaacaagaac cctagtatth cttgaagtta atggaaaactt ttctttgggt 850
 tttccagttg tgaccctgtt tccaaccagt tctgcagcat attagattct 900
 agacaagcaa caccctctg gagccagcac agtgctcctc catatcacca 950
 gtcatacaca gcctcattat taaggtctta ttttaatttca gagtgtaaat 1000
 tttttcaagt gtcattagg ttttataaac aagaagctac atttttgccc 1050
 ttaagacact acttacagtg ttatgacttg tatacacata tattgggtatc 1100
 aaaggggata aaagccaatt tgtctgttac atttcctttc acgtatttct 1150
 ttttagcagca cttctgtac taaagttaat gtgtttactc tctttccttc 1200
 ccacattctc aattaaaagg tgagctaagc ctctcgggtg tttctgatta 1250
 acagtaaadc ctaaaattcaa actgttaaact gacattttta tttttatgtc 1300
 tctccttaac tatgagacac atcttggttt actgaatttc tttcaatatt 1350
 ccaggtgata gatttttgtc g 1371

<210> 389

<211> 215

<212> PRT

<213> Homo sapiens

<400> 389

Met	Tyr	Gly	Lys	Ser	Ser	Thr	Arg	Ala	Val	Leu	Leu	Leu	Leu	Gly
1				5					10					15

Ile	Gln	Leu	Thr	Ala	Leu	Trp	Pro	Ile	Ala	Ala	Val	Glu	Ile	Tyr	
				20					25					30	
Thr	Ser	Arg	Val	Leu	Glu	Ala	Val	Asn	Gly	Thr	Asp	Ala	Arg	Leu	
				35					40					45	
Lys	Cys	Thr	Phe	Ser	Ser	Phe	Ala	Pro	Val	Gly	Asp	Ala	Leu	Thr	
				50					55					60	
Val	Thr	Trp	Asn	Phe	Arg	Pro	Leu	Asp	Gly	Gly	Pro	Glu	Gln	Phe	
				65					70					75	
Val	Phe	Tyr	Tyr	His	Ile	Asp	Pro	Phe	Gln	Pro	Met	Ser	Gly	Arg	
				80					85					90	
Phe	Lys	Asp	Arg	Val	Ser	Trp	Asp	Gly	Asn	Pro	Glu	Arg	Tyr	Asp	
				95					100					105	
Ala	Ser	Ile	Leu	Leu	Trp	Lys	Leu	Gln	Phe	Asp	Asp	Asn	Gly	Thr	
				110					115					120	
Tyr	Thr	Cys	Gln	Val	Lys	Asn	Pro	Pro	Asp	Val	Asp	Gly	Val	Ile	
				125					130					135	
Gly	Glu	Ile	Arg	Leu	Ser	Val	Val	His	Thr	Val	Arg	Phe	Ser	Glu	
				140					145					150	
Ile	His	Phe	Leu	Ala	Leu	Ala	Ile	Gly	Ser	Ala	Cys	Ala	Leu	Met	
				155					160					165	
Ile	Ile	Ile	Val	Ile	Val	Val	Val	Leu	Phe	Gln	His	Tyr	Arg	Lys	
				170					175					180	
Lys	Arg	Trp	Ala	Glu	Arg	Ala	His	Lys	Val	Val	Glu	Ile	Lys	Ser	
				185					190					195	
Lys	Glu	Glu	Glu	Arg	Leu	Asn	Gln	Glu	Lys	Lys	Val	Ser	Val	Tyr	
				200					205					210	
Leu	Glu	Asp	Thr	Asp											
				215											

<210> 390
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 390
 ccgaggccat ctagaggcca gagc 24

<210> 391
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 391
 acaggcagag ccaatggcca gagc 24

<210> 392
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 392
gagaggactg cgggagtttg ggacctttgt gcagacgtgc tcatg 45

<210> 393
<211> 471
<212> DNA
<213> Homo sapiens

<400> 393
gcatttttgt ctgtgctccc tgatcttcag gtcaccacca tgaagttctt 50
agcagtcctg gtactcttgg gagtttccat ctttctggtc totgcccaga 100
atccgacaac agctgctcca gctgacacgt atccagctac tggctctgct 150
gatgatgaag cccctgatgc tgaaccact gctgctgcaa ccaactgcgac 200
cactgctgct cctaccactg caaccaccgc tgcttctacc actgctcgta 250
aagacattcc agttttaccc aaatgggttg gggatctccc gaatggtaga 300
gtgtgtccct gagatggaat cagcttgagt cttctgcaat tggtcacaac 350
tattcatgct tctgtgatt tcatccaact acttaccttg cctacgatat 400
cccctttatc tctaatacgt ttatttttctt tcaaataaaa aataactatg 450
agcaacataa aaaaaaaaaa a 471

<210> 394
<211> 90
<212> PRT
<213> Homo sapiens

<400> 394
Met Lys Phe Leu Ala Val Leu Val Leu Leu Gly Val Ser Ile Phe
1 5 10 15
Leu Val Ser Ala Gln Asn Pro Thr Thr Ala Ala Pro Ala Asp Thr
20 25 30
Tyr Pro Ala Thr Gly Pro Ala Asp Asp Glu Ala Pro Asp Ala Glu
35 40 45
Thr Thr Ala Ala Ala Thr Thr Ala Thr Thr Ala Ala Pro Thr Thr
50 55 60
Ala Thr Thr Ala Ala Ser Thr Thr Ala Arg Lys Asp Ile Pro Val
65 70 75
Leu Pro Lys Trp Val Gly Asp Leu Pro Asn Gly Arg Val Cys Pro
80 85 90

<210> 395
<211> 25

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 395
gctccctgat cttcatgtca ccacc 25

<210> 396
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 396
cagggacaca ctctaccatt cgggag 26

<210> 397
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 397
ccatctttct ggtctctgcc cagaatccga caacagctgc tc 42

<210> 398
<211> 907
<212> DNA
<213> Homo sapiens

<400> 398
ggactctgaa ggtcccaagc agctgctgag gcccccaagg aagtgggttc 50
aaccttggac ccctaggggt ctggatttgc tggttaacaa gataacctga 100
gggcaggacc ccatagggga atgctacctc ctgccccttc acctgccctg 150
gtgttcacgg tggcctggtc cctccttgcc gagagagtgt cctgggtcag 200
ggacgcagag gacgctcaca gactccagcc ctttggttacc gagaggacac 250
ttggcaaggt ccagcgatgg tccggagtcc acacacagac tggcggcagg 300
gcaggagggg gacagttctg ttgtgcttgg ttggacagta agaggggtctt 350
ggccagtcca ggggtggggg cggcaaaact cataaagaac cagaggggtct 400
gggccccggc cacagagtca tctgcccagc tcctctgctg ctggccagtg 450
ggagtggcac gaggtggggc tttgtgccag taaaaccaca ggctggattt 500
gcctgcgggc catggtcctt gtctagggca gcaattctca accttcttgc 550
tctcaggacc ccaaagagct ttcattgtat ctattgattt ttaccacatt 600
agcaattaaa actgagaaat gggccgggca cggtggtctca cgcctgtaat 650

cccagcactt tgggaggccg aggcgggtgg atcacctgag atcaggagtt 700
 caagaccagc ctggccaaca tgggtgaaacc ttgtctacta aaaatacaaa 750
 aaattagcca ggcacagtgg tgtgactgg tagtcccagt tactcgggag 800
 gctgaggcag gaaaatcgct tgaaccacagg aggcggacgt tgcggtgagc 850
 cgagatcgcg ccgctgattc cagcctgggc gacaagagtg agactccatc 900
 tcacaca 907

<210> 399
 <211> 120
 <212> PRT
 <213> Homo sapiens

<400> 399
 Met Leu Pro Pro Ala Leu Pro Pro Ala Leu Val Phe Thr Val Ala
 1 5 10 15
 Trp Ser Leu Leu Ala Glu Arg Val Ser Trp Val Arg Asp Ala Glu
 20 25 30
 Asp Ala His Arg Leu Gln Pro Phe Val Thr Glu Arg Thr Leu Gly
 35 40 45
 Lys Val Gln Arg Trp Ser Gly Val His Thr Gln Thr Gly Gly Arg
 50 55 60
 Ala Gly Gly Gly Gln Phe Cys Cys Ala Trp Leu Asp Ser Lys Arg
 65 70 75
 Val Leu Ala Ser Pro Gly Trp Gly Ala Ala Asn Ser Ile Lys Asn
 80 85 90
 Gln Arg Val Trp Ala Pro Ala Thr Glu Ser Ser Ala Gln Leu Leu
 95 100 105
 Cys Cys Trp Pro Val Gly Val Ala Arg Gly Gly Ala Leu Cys Gln
 110 115 120

<210> 400
 <211> 893
 <212> DNA
 <213> Homo sapiens

<400> 400
 gtcattgccag tgcctgctct gtgcctgctc tgggccctgg caatggtgac 50
 ccggcctgcc tcagcggccc ccatgggagg cccagaactg gcacagcatg 100
 aggagctgac cctgctcttc catgggaccc tgcagctggg ccaggccctc 150
 aacggtgtgt acaggaccac ggagggaagg ctgacaaagg ccaggaacag 200
 cctgggtctc tatggccgca caatagaact cctggggcag gaggtcagcc 250
 ggggccggga tgcagcccag gaacttcggg caagcctgtt ggagactcag 300
 atggaggagg atattctgca gctgcaggca gaggccacag ctgaggtgct 350
 gggggagggtg gccacggcac agaagggtgt acgggacagc gtgcagcggc 400

tagaagtcca gctgaggagc gcctggctgg gccctgccta ccgagaattt 450
 gaggtcttaa aggctcacgc tgacaagcag agccacatcc tatgggccct 500
 cacaggccac gtgcagcggc agaggcggga gatggtggca cagcagcatc 550
 ggctgcgaca gatccaggag agactccaca cagcggcgct cccagcctga 600
 atctgcctgg atggaactga ggaccaatca tgctgcaagg aacacttcca 650
 cgccccgtga ggccccctgtg cagggaggag ctgcctgttc actgggatca 700
 gccagggcgc cgggccccac ttctgagcac agagcagaga cagacgcagg 750
 cggggacaaa ggacagaggat gtagcccat tggggagggg tggaggaagg 800
 acatgtaccc tttcatgcct acacacccct cattaagca gagtcgtggc 850
 atttcaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 893

<210> 401
 <211> 198
 <212> PRT
 <213> Homo sapiens

<400> 401
 Met Pro Val Pro Ala Leu Cys Leu Leu Trp Ala Leu Ala Met Val
 1 5 10 15
 Thr Arg Pro Ala Ser Ala Ala Pro Met Gly Gly Pro Glu Leu Ala
 20 25 30
 Gln His Glu Glu Leu Thr Leu Leu Phe His Gly Thr Leu Gln Leu
 35 40 45
 Gly Gln Ala Leu Asn Gly Val Tyr Arg Thr Thr Glu Gly Arg Leu
 50 55 60
 Thr Lys Ala Arg Asn Ser Leu Gly Leu Tyr Gly Arg Thr Ile Glu
 65 70 75
 Leu Leu Gly Gln Glu Val Ser Arg Gly Arg Asp Ala Ala Gln Glu
 80 85 90
 Leu Arg Ala Ser Leu Leu Glu Thr Gln Met Glu Glu Asp Ile Leu
 95 100 105
 Gln Leu Gln Ala Glu Ala Thr Ala Glu Val Leu Gly Glu Val Ala
 110 115 120
 Gln Ala Gln Lys Val Leu Arg Asp Ser Val Gln Arg Leu Glu Val
 125 130 135
 Gln Leu Arg Ser Ala Trp Leu Gly Pro Ala Tyr Arg Glu Phe Glu
 140 145 150
 Val Leu Lys Ala His Ala Asp Lys Gln Ser His Ile Leu Trp Ala
 155 160 165
 Leu Thr Gly His Val Gln Arg Gln Arg Arg Glu Met Val Ala Gln
 170 175 180
 Gln His Arg Leu Arg Gln Ile Gln Glu Arg Leu His Thr Ala Ala

Leu Pro Ala

<210> 402
 <211> 1915
 <212> DNA
 <213> Homo sapiens

<400> 402
 ggcaacatgg ctcagcaggc ttgccccaga gccatggcaa agaatggact 50
 tgtaatttgc atcctggtga tcaccttact cctggaccag accaccagcc 100
 acacatccag attaaaagcc aggaagcaca gcaaacgtcg agtgagagac 150
 aaggatggag atctgaagac tcaaattgaa aagctctgga cagaagtcaa 200
 tgccttgaag gaaattcaag ccctgcagac agtctgtctc cgaggcacta 250
 aagttcacaa gaaatgctac cttgcttcag aaggtttgaa gcatttccat 300
 gaggccaatg aagactgcat ttccaaagga ggaatcctgg ttatccccag 350
 gaactccgac gaaatcaacg ccctccaaga ctatggtaaa aggagcctgc 400
 caggtgtcaa tgacttttgg ctgggcatca atgacatggc cacggaaggc 450
 aagtttggtg acgtcaacgg aatcgctatc tccttcctca actgggaccg 500
 tgcacagcct aacggtggca agcgagaaaa ctgtgtcctg ttctcccaat 550
 cagctcaggg caagtggagt gatgaggcct gtcgcagcag caagagatac 600
 atatgcgagt tcaccatccc taaataggtc tttctccaat gtgtcctcca 650
 agcaagattc atcataactt ataggttcat gatctctaag atcaagtaaa 700
 aatcataatt tttacttatt aaaaaattgc aacacaagat caatgtccat 750
 agcaatatga tagcatcagc caattttgct aacacatttc tttgggattt 800
 tgcccttcct ggggtatagg ggatcagaaa tattgatcca tgtgcacgca 850
 gataaaatgg cttctgctaa acagactaaa atctttctct ctagtctttc 900
 tcacttgtag aaaccagtt tgttttcaaa aaatcacagt agcaatgcaa 950
 ctcatcactc tagaaaagca agcttaggct acctgaaaga tttcccttg 1000
 gaagtttagc gtatgtttga ctaacaaaaa ttccctacat cagagactct 1050
 aggtgctata taatccaaaa acttttcagc ctgttgctca ttctgtccca 1100
 tgctggcaat aataccttgt cagcccatta cccttatttt gaattgctcc 1150
 atctcctggt gggacttgta tcttgctgc catatcagaa cacaaacccc 1200
 tgaagagggt ctgatttgat tttttttttt tcttcatgcc tacccttttt 1250
 ttggaagttt ccagccgcaa tttgaaatga aatgacaagg tgtatatattg 1300

atcaattttc attcccacca ttgcattaca acctctaact taaatgggta 1350
 accctaaggc atatcaaaga agcagattgc atgataaacg gaaatagaaa 1400
 aaaagaacct acattttattt tgcttttagca tccttactct caccttttat 1450
 gagattgaga gtggacttac atttcotttt ttacattttc gtatatttat 1500
 ttttttttagc catcattata tgtttaagtc tattatgggc aaccaatctt 1550
 tggaagctga aaactgaatt taaagaatgc tatcttggaa aattgcatac 1600
 gtctgtgcaa tttttttattc tgcctagtagc tattctgctt gtttaactag 1650
 attgtacaaa ataacttcat tgcttaatat caaattacaa agtttagact 1700
 tggaggggaaa tgggcttttt agaagcaaac aatttttaa atattttgtt 1750
 cttcaaataa atagtgttta aacattgaat gtgttttgtg aacaatatcc 1800
 cactttgcaa actttaacta cacatgcttg gaattaagtt ttagctgttt 1850
 tcattgctca ataataaagc ctgaattctg atcaataaaa aaaaaaaaaa 1900
 aaaaaaaaaa aaaaa 1915

<210> 403
 <211> 206
 <212> PRT
 <213> Homo sapiens

<400> 403
 Met Ala Gln Gln Ala Cys Pro Arg Ala Met Ala Lys Asn Gly Leu
 1 5 10 15
 Val Ile Cys Ile Leu Val Ile Thr Leu Leu Leu Asp Gln Thr Thr
 20 25 30
 Ser His Thr Ser Arg Leu Lys Ala Arg Lys His Ser Lys Arg Arg
 35 40 45
 Val Arg Asp Lys Asp Gly Asp Leu Lys Thr Gln Ile Glu Lys Leu
 50 55 60
 Trp Thr Glu Val Asn Ala Leu Lys Glu Ile Gln Ala Leu Gln Thr
 65 70 75
 Val Cys Leu Arg Gly Thr Lys Val His Lys Lys Cys Tyr Leu Ala
 80 85 90
 Ser Glu Gly Leu Lys His Phe His Glu Ala Asn Glu Asp Cys Ile
 95 100 105
 Ser Lys Gly Gly Ile Leu Val Ile Pro Arg Asn Ser Asp Glu Ile
 110 115 120
 Asn Ala Leu Gln Asp Tyr Gly Lys Arg Ser Leu Pro Gly Val Asn
 125 130 135
 Asp Phe Trp Leu Gly Ile Asn Asp Met Val Thr Glu Gly Lys Phe
 140 145 150
 Val Asp Val Asn Gly Ile Ala Ile Ser Phe Leu Asn Trp Asp Arg

	155		160		165
Ala Gln Pro Asn Gly Gly Lys Arg Glu Asn Cys Val Leu Phe Ser	170		175		180
Gln Ser Ala Gln Gly Lys Trp Ser Asp Glu Ala Cys Arg Ser Ser	185		190		195
Lys Arg Tyr Ile Cys Glu Phe Thr Ile Pro Lys	200		205		

<210> 404
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 404
 cctgggtatc cccaggaact ccgac 25

<210> 405
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 405
 ctcttgctgc tgcgacaggc ctc 23

<210> 406
 <211> 46
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 406
 cgccctccaa gactatggta aaaggagcct gccaggtgtc aatgac 46

<210> 407
 <211> 570
 <212> DNA
 <213> Homo sapiens

<400> 407
 gcgaggaccg ggtataagaa gcctcgtggc cttgcccggg cagccgcagg 50
 ttccccgcgc gccccgagcc cccgcgccat gaagctcgcc gccctcctgg 100
 ggctctgcgt ggccctgtcc tgcagctcgg ctgctgcttt cttagtgggc 150
 tcggccaagc ctgtggccca gcctgtogct gcgctggagt cggcggcgga 200
 ggccggggcc gggaccctgg ccaacccct cggcaccctc aaccgctga 250
 agctcctgct gagcagcctg ggcacccccg tgaaccacct catagagggc 300
 tcccagaagt gtgtggctga gctgggtccc caggccgtgg gggccgtgaa 350

ggccctgaag gccctgctgg gggccctgac agtgtttggc tgagccgaga 400
 ctggagcatc tacacctgag gacaagacgc tgcccacccg cgaggggtga 450
 aaaccccgcc gcggggagga cctgccatcc ccttcccccg gccctctca 500
 ataaacgtgg ttaagagcaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550
 aaaaaaaaaa aaaaaaaaaa 570

<210> 408
 <211> 104
 <212> PRT
 <213> Homo sapiens

<400> 408
 Met Lys Leu Ala Ala Leu Leu Gly Leu Cys Val Ala Leu Ser Cys
 1 5 10 15
 Ser Ser Ala Ala Ala Phe Leu Val Gly Ser Ala Lys Pro Val Ala
 20 25 30
 Gln Pro Val Ala Ala Leu Glu Ser Ala Ala Glu Ala Gly Ala Gly
 35 40 45
 Thr Leu Ala Asn Pro Leu Gly Thr Leu Asn Pro Leu Lys Leu Leu
 50 55 60
 Leu Ser Ser Leu Gly Ile Pro Val Asn His Leu Ile Glu Gly Ser
 65 70 75
 Gln Lys Cys Val Ala Glu Leu Gly Pro Gln Ala Val Gly Ala Val
 80 85 90
 Lys Ala Leu Lys Ala Leu Leu Gly Ala Leu Thr Val Phe Gly
 95 100

<210> 409
 <211> 2089
 <212> DNA
 <213> Homo sapiens

<400> 409
 tgaaggactt ttccaggacc caaggccaca cactggaagt cttgcagctg 50
 aaggagggca ctcccttgcc tccgcagccg atcacatgaa ggtggtgcc 100
 agtctcctgc tctccgtcct cctggcacag gtgtggctgg taccggctt 150
 ggccccagt cctcagtcgc cagagacccc agcccctcag aaccagacca 200
 gcagggtagt gcaggctccc agggaggaag aggaagatga gcaggaggcc 250
 agcgaggaga aggccggtga ggaagagaaa gcctggctga tggccagcag 300
 gcagcagctt gccaaggaga cttcaaactt cggattcagc ctgctgcgaa 350
 agatctccat gaggcacgat ggcaacatgg tcttctctcc atttggcatg 400
 tccttgGCCA tgacaggctt gatgctgggg gccacagggc cgactgaaac 450
 ccagatcaag agagggtcc acttgcaggc cctgaagccc accaagccc 500

ggctcctgcc ttccctcttt aagggaactca gagagaccct ctcccgaac 550
 ctggaactgg gcctctcaca ggggagtttt gccttcatcc acaaggattt 600
 tgatgtcaaa gagactttct tcaattttatc caagaggtat ttgatacag 650
 agtgcgtgcc tatgaatttt cgcaatgcct cacaggccaa aaggctcatg 700
 aatcattaca ttaacaaaga gactcggggg aaaattccca aactgtttga 750
 tgagattaat cctgaaacca aattaattct tgtggattac atcttgttca 800
 aagggaatg gttgaccca tttgaccctg tcttcaccga agtcgacact 850
 ttccacctgg acaagtacaa gaccattaag gtgcccatga tgtacggtgc 900
 aggcaagttt gcctccacct ttgacaagaa ttttcgttgt catgtcctca 950
 aactgcccta ccaaggaaat gccaccatgc tgggtggtcct catggagaaa 1000
 atgggtgacc acctcgccct tgaagactac ctgaccacag acttggtgga 1050
 gacatggctc agaaacatga aaaccagaaa catggaagtt ttctttccga 1100
 agttcaagct agatcagaag tatgagatgc atgagctgct taggcagatg 1150
 ggaatcagaa gaatcttctc accctttgct gaccttagtg aactctcagc 1200
 tactggaaga aatctccaag tatccaggtt tttacgaaga acagtgattg 1250
 aagttgatga aaggggcact gaggcagtgg caggaatctt gtcagaaatt 1300
 actgcttatt ccatgcctcc tgatcatcaa gtggaccggc catttcattt 1350
 catgatctat gaagaaacct ctggaatgct tctgtttctg ggcagggtgg 1400
 tgaatccgac tctcctataa ttcaggacat gcataagcac ttcgtgctgt 1450
 agtagatgct gaatctgagg tatcaaacac acacaggata ccagcaatgg 1500
 atggcagggg agagtgttcc ttttgttctt aactagttaa ggggtgttctc 1550
 aaataaatac agtagtcccc acttatctga gggggataca ttcaaagacc 1600
 cccagcagat gcctgaaacg gtggacagtg ctgaacctta tatatatattt 1650
 ttctacaca tacataccta tgataaagtt taatttataa attaggcaca 1700
 gtaagagatt aacaataata acaacattaa gtaaaatgag ttacttgaac 1750
 gcaagcactg caataccata acagtcaaac tgattataga gaaggctact 1800
 aagtgactca tgggcgagga gcatagacag tgtggagaca ttgggcaagg 1850
 ggagaattca catcctgggt gggacagagc aggacgatgc aagattccat 1900
 cccactactc agaatggcat gctgcttaag acttttagat tgtttatttc 1950
 tggaattttt catttaatgt ttttgacca tggttgacca tggttaactg 2000
 agactgcaga aagcaaaacc atggataagg gaggactact acaaaagcat 2050
 taaattgata catatttttt aaaaaaaaaa aaaaaaaaaa 2089

<210> 410
 <211> 444
 <212> PRT
 <213> Homo sapiens

<400> 410

Met	Lys	Val	Val	Pro	Ser	Leu	Leu	Leu	Ser	Val	Leu	Leu	Ala	Gln	1	5	10	15
Val	Trp	Leu	Val	Pro	Gly	Leu	Ala	Pro	Ser	Pro	Gln	Ser	Pro	Glu	20	25	30	
Thr	Pro	Ala	Pro	Gln	Asn	Gln	Thr	Ser	Arg	Val	Val	Gln	Ala	Pro	35	40	45	
Arg	Glu	Glu	Glu	Glu	Asp	Glu	Gln	Glu	Ala	Ser	Glu	Glu	Lys	Ala	50	55	60	
Gly	Glu	Glu	Glu	Lys	Ala	Trp	Leu	Met	Ala	Ser	Arg	Gln	Gln	Leu	65	70	75	
Ala	Lys	Glu	Thr	Ser	Asn	Phe	Gly	Phe	Ser	Leu	Leu	Arg	Lys	Ile	80	85	90	
Ser	Met	Arg	His	Asp	Gly	Asn	Met	Val	Phe	Ser	Pro	Phe	Gly	Met	95	100	105	
Ser	Leu	Ala	Met	Thr	Gly	Leu	Met	Leu	Gly	Ala	Thr	Gly	Pro	Thr	110	115	120	
Glu	Thr	Gln	Ile	Lys	Arg	Gly	Leu	His	Leu	Gln	Ala	Leu	Lys	Pro	125	130	135	
Thr	Lys	Pro	Gly	Leu	Leu	Pro	Ser	Leu	Phe	Lys	Gly	Leu	Arg	Glu	140	145	150	
Thr	Leu	Ser	Arg	Asn	Leu	Glu	Leu	Gly	Leu	Ser	Gln	Gly	Ser	Phe	155	160	165	
Ala	Phe	Ile	His	Lys	Asp	Phe	Asp	Val	Lys	Glu	Thr	Phe	Phe	Asn	170	175	180	
Leu	Ser	Lys	Arg	Tyr	Phe	Asp	Thr	Glu	Cys	Val	Pro	Met	Asn	Phe	185	190	195	
Arg	Asn	Ala	Ser	Gln	Ala	Lys	Arg	Leu	Met	Asn	His	Tyr	Ile	Asn	200	205	210	
Lys	Glu	Thr	Arg	Gly	Lys	Ile	Pro	Lys	Leu	Phe	Asp	Glu	Ile	Asn	215	220	225	
Pro	Glu	Thr	Lys	Leu	Ile	Leu	Val	Asp	Tyr	Ile	Leu	Phe	Lys	Gly	230	235	240	
Lys	Trp	Leu	Thr	Pro	Phe	Asp	Pro	Val	Phe	Thr	Glu	Val	Asp	Thr	245	250	255	
Phe	His	Leu	Asp	Lys	Tyr	Lys	Thr	Ile	Lys	Val	Pro	Met	Met	Tyr	260	265	270	
Gly	Ala	Gly	Lys	Phe	Ala	Ser	Thr	Phe	Asp	Lys	Asn	Phe	Arg	Cys	275	280	285	

His	Val	Leu	Lys	Leu	Pro	Tyr	Gln	Gly	Asn	Ala	Thr	Met	Leu	Val	
				290					295					300	
Val	Leu	Met	Glu	Lys	Met	Gly	Asp	His	Leu	Ala	Leu	Glu	Asp	Tyr	
				305					310					315	
Leu	Thr	Thr	Asp	Leu	Val	Glu	Thr	Trp	Leu	Arg	Asn	Met	Lys	Thr	
				320					325					330	
Arg	Asn	Met	Glu	Val	Phe	Phe	Pro	Lys	Phe	Lys	Leu	Asp	Gln	Lys	
				335					340					345	
Tyr	Glu	Met	His	Glu	Leu	Leu	Arg	Gln	Met	Gly	Ile	Arg	Arg	Ile	
				350					355					360	
Phe	Ser	Pro	Phe	Ala	Asp	Leu	Ser	Glu	Leu	Ser	Ala	Thr	Gly	Arg	
				365					370					375	
Asn	Leu	Gln	Val	Ser	Arg	Val	Leu	Arg	Arg	Thr	Val	Ile	Glu	Val	
				380					385					390	
Asp	Glu	Arg	Gly	Thr	Glu	Ala	Val	Ala	Gly	Ile	Leu	Ser	Glu	Ile	
				395					400					405	
Thr	Ala	Tyr	Ser	Met	Pro	Pro	Val	Ile	Lys	Val	Asp	Arg	Pro	Phe	
				410					415					420	
His	Phe	Met	Ile	Tyr	Glu	Glu	Thr	Ser	Gly	Met	Leu	Leu	Phe	Leu	
				425					430					435	
Gly	Arg	Val	Val	Asn	Pro	Thr	Leu	Leu							
				440											

<210> 411
 <211> 636
 <212> DNA
 <213> Homo sapiens

<400> 411
 ctgggatcag ccaactgcagc tccctgagca ctctctacag agacgcggac 50
 cccagacatg aggaggctcc tcttggtcac cagcctggtg gttgtgctgc 100
 tgtgggaggc aggtgcagtc ccagcaccca aggtccctat caagatgcaa 150
 gtcaaactact ggccctcaga gcaggaccca gagaaggcct ggggcgccc 200
 tgtggtggag cctccggaga aggacgacca gctggtggtg ctgttccctg 250
 tccagaagcc gaaactcttg accaccgagg agaagccacg aggtcagggc 300
 aggggccccca tccttccagg caccaaggcc tggatggaga ccgaggacac 350
 cctgggccgt gtcctgagtc ccgagccoga ccatgacagc ctgtaccacc 400
 ctccgcctga ggaggaccag ggcgaggaga ggccccggtt gtgggtgatg 450
 ccaaactcacc aggtgtcctt gggaccggag gaagaccaag accacatcta 500
 ccacccccag tagggctcca ggggccatca ctgccccgcg cctgtcccaa 550
 ggcccaggct gttgggactg ggaccctccc taccctgccc cagctagaca 600

aataaacccc agcaggcaaa aaaaaaaaaa aaaaaa 636

<210> 412
<211> 151
<212> PRT
<213> Homo sapiens

<400> 412
Met Arg Arg Leu Leu Leu Val Thr Ser Leu Val Val Val Leu Leu
1 5 10 15
Trp Glu Ala Gly Ala Val Pro Ala Pro Lys Val Pro Ile Lys Met
20 25 30
Gln Val Lys His Trp Pro Ser Glu Gln Asp Pro Glu Lys Ala Trp
35 40 45
Gly Ala Arg Val Val Glu Pro Pro Glu Lys Asp Asp Gln Leu Val
50 55 60
Val Leu Phe Pro Val Gln Lys Pro Lys Leu Leu Thr Thr Glu Glu
65 70 75
Lys Pro Arg Gly Gln Gly Arg Gly Pro Ile Leu Pro Gly Thr Lys
80 85 90
Ala Trp Met Glu Thr Glu Asp Thr Leu Gly Arg Val Leu Ser Pro
95 100 105
Glu Pro Asp His Asp Ser Leu Tyr His Pro Pro Pro Glu Glu Asp
110 115 120
Gln Gly Glu Glu Arg Pro Arg Leu Trp Val Met Pro Asn His Gln
125 130 135
Val Leu Leu Gly Pro Glu Glu Asp Gln Asp His Ile Tyr His Pro
140 145 150
Gln

<210> 413
<211> 1176
<212> DNA
<213> Homo sapiens

<400> 413
agaaagctgc actctgttga gctccagggc gcagtggagg gagggagtga 50
aggagctctc tgtaccaag gaaagtgcag ctgagactca gacaagatta 100
caatgaacca actcagcttc ctgctgtttc tcatagcgac caccagagga 150
tggagtacag atgaggctaa tacttacttc aaggaatgga cctgttcttc 200
gtctccatct ctgcccagaa gctgcaagga aatcaaagac gaatgtccta 250
gtgcatttga tggcctgtat tttctccgca ctgagaatgg tgttatctac 300
cagaccttct gtgacatgac ctctgggggt ggcggtgga ccctggtggc 350
cagcgtgcat gagaatgaca tgcgtgggaa gtgcacggtg ggcgatcgct 400

ggtccagtca gcagggcagc aaagcagact acccagaggg ggacggcaac 450
 tgggccaact acaacacctt tggatctgca gaggcggcca cgagcgatga 500
 ctacaagaac cctggctact acgacatcca ggccaaggac ctgggcatct 550
 ggcacgtgcc caataagtcc cccatgcagc actggagaaa cagctccctg 600
 ctgaggtacc gcacggacac tggcttcctc cagacactgg gacataatct 650
 gtttggcatc taccagaaat atccagtga atattggagaa ggaaagtgtt 700
 ggactgacaa cggcccgggtg atccctgtgg tctatgattt tggcgacgcc 750
 cagaaaacag catcttatta ctcaccctat ggccagcggg aattcactgc 800
 gggatttgtt cagttcaggg tatttaataa cgagagagca gccaacgcct 850
 tgtgtgctgg aatgagggtc accggatgta aactgagca tcaactgcatt 900
 ggtggaggag gatactttcc agaggccagt cccagcagt gtggagattt 950
 ttctgggttt gattggagtg gatatggaac tcatgttggg tacagcagca 1000
 gccgtgagat aactgaggca gctgtgcttc tattctatcg ttgagagttt 1050
 tgtgggaggg aaccagacc tctcctccca accatgagat cccaaggatg 1100
 gagaacaact taccagtag ctagaatgtt aatggcagaa gagaaaacaa 1150
 taaatcatat tgactcaaga aaaaaa 1176

<210> 414

<211> 313

<212> PRT

<213> Homo sapiens

<400> 414

Met	Asn	Gln	Leu	Ser	Phe	Leu	Leu	Phe	Leu	Ile	Ala	Thr	Thr	Arg
1				5					10					15
Gly	Trp	Ser	Thr	Asp	Glu	Ala	Asn	Thr	Tyr	Phe	Lys	Glu	Trp	Thr
				20					25					30
Cys	Ser	Ser	Ser	Pro	Ser	Leu	Pro	Arg	Ser	Cys	Lys	Glu	Ile	Lys
				35					40					45
Asp	Glu	Cys	Pro	Ser	Ala	Phe	Asp	Gly	Leu	Tyr	Phe	Leu	Arg	Thr
				50					55					60
Glu	Asn	Gly	Val	Ile	Tyr	Gln	Thr	Phe	Cys	Asp	Met	Thr	Ser	Gly
				65					70					75
Gly	Gly	Gly	Trp	Thr	Leu	Val	Ala	Ser	Val	His	Glu	Asn	Asp	Met
				80					85					90
Arg	Gly	Lys	Cys	Thr	Val	Gly	Asp	Arg	Trp	Ser	Ser	Gln	Gln	Gly
				95					100					105
Ser	Lys	Ala	Asp	Tyr	Pro	Glu	Gly	Asp	Gly	Asn	Trp	Ala	Asn	Tyr
				110					115					120
Asn	Thr	Phe	Gly	Ser	Ala	Glu	Ala	Ala	Thr	Ser	Asp	Asp	Tyr	Lys

125					130					135				
Asn	Pro	Gly	Tyr	Tyr	Asp	Ile	Gln	Ala	Lys	Asp	Leu	Gly	Ile	Trp
				140					145					150
His	Val	Pro	Asn	Lys	Ser	Pro	Met	Gln	His	Trp	Arg	Asn	Ser	Ser
				155					160					165
Leu	Leu	Arg	Tyr	Arg	Thr	Asp	Thr	Gly	Phe	Leu	Gln	Thr	Leu	Gly
				170					175					180
His	Asn	Leu	Phe	Gly	Ile	Tyr	Gln	Lys	Tyr	Pro	Val	Lys	Tyr	Gly
				185					190					195
Glu	Gly	Lys	Cys	Trp	Thr	Asp	Asn	Gly	Pro	Val	Ile	Pro	Val	Val
				200					205					210
Tyr	Asp	Phe	Gly	Asp	Ala	Gln	Lys	Thr	Ala	Ser	Tyr	Tyr	Ser	Pro
				215					220					225
Tyr	Gly	Gln	Arg	Glu	Phe	Thr	Ala	Gly	Phe	Val	Gln	Phe	Arg	Val
				230					235					240
Phe	Asn	Asn	Glu	Arg	Ala	Ala	Asn	Ala	Leu	Cys	Ala	Gly	Met	Arg
				245					250					255
Val	Thr	Gly	Cys	Asn	Thr	Glu	His	His	Cys	Ile	Gly	Gly	Gly	Gly
				260					265					270
Tyr	Phe	Pro	Glu	Ala	Ser	Pro	Gln	Gln	Cys	Gly	Asp	Phe	Ser	Gly
				275					280					285
Phe	Asp	Trp	Ser	Gly	Tyr	Gly	Thr	His	Val	Gly	Tyr	Ser	Ser	Ser
				290					295					300
Arg	Glu	Ile	Thr	Glu	Ala	Ala	Val	Leu	Leu	Phe	Tyr	Arg		
				305					310					

<210> 415
 <211> 1281
 <212> DNA
 <213> Homo sapiens

<400> 415
 gcggagccgg cgccggctgc gcagaggagc cgctctcgcc gccgccacct 50
 cggctggggag cccacgaggc tgccgcatcc tgccctcgga acaatggggac 100
 tcggcgcgcg aggtgcttgg gccgcgctgc tcctggggac gctgcaggtg 150
 ctagcgctgc tggggggcgc ccatgaaagc gcagccatgg cggcatctgc 200
 aaacatagag aattctgggc ttccacacaa ctccagtgt aactcaacag 250
 agactctcca acatgtgcct tctgaccata caaatgaaac ttccaacagt 300
 actgtgaaac caccaacttc agttgcctca gactccagta atacaacggt 350
 caccaccatg aaacctacag cggcatctaa tacaacaaca ccagggatgg 400
 totcaacaaa tatgacttct accaccttaa agtctacacc caaaacaaca 450
 agtgtttcac agaacacatc tcagatatca acatccacaa tgaccgtaac 500

ccacaatagt tcagtgacat ctgctgcttc atcagtaaca atcacaacaa 550
 ctatgcattc tgaagcaaag aaaggatcaa aatttgatac tgggagcttt 600
 gttggtggta ttgtattaac gctgggagtt ttatctattc tttacattgg 650
 atgcaaaatg tattactcaa gaagaggcat tcggtatcga accatagatg 700
 aacatgatgc catcatttaa ggaaatccat ggaccaagga tggaatacag 750
 attgatgctg ccctatcaat taattttggt ttattaatag tttaaaacaa 800
 tattotcttt ttgaaaatag tataaacagg ccatgcatat aatgtacagt 850
 gtattacgta aatatgtaaa gattcttcaa ggtaacaagg gtttgggttt 900
 tgaaataaac atctggatct tatagaccgt tcatacaatg gttttagcaa 950
 gttcatagta agacaaacaa gtcctatctt ttttttttgg ctgggggtggg 1000
 ggcattggtc acatatgacc agtaattgaa agacgtcatc actgaaagac 1050
 agaatgccat ctgggcatac aaataagaag tttgtcacag cactcaggat 1100
 tttgggtatc ttttgtagct cacataaaga acttcagtgc ttttcagagc 1150
 tggatatatc ttaattacta atgccacaca gaaattatac aatcaaacta 1200
 gatctgaagc ataatttaag aaaaacatca acattttttg tgctttaaac 1250
 tgtagtagtt ggtctagaaa caaaatactc c 1281

<210> 416
 <211> 208
 <212> PRT
 <213> Homo sapiens

<400> 416
 Met Gly Leu Gly Ala Arg Gly Ala Trp Ala Ala Leu Leu Leu Gly
 1 5 10 15
 Thr Leu Gln Val Leu Ala Leu Leu Gly Ala Ala His Glu Ser Ala
 20 25 30
 Ala Met Ala Ala Ser Ala Asn Ile Glu Asn Ser Gly Leu Pro His
 35 40 45
 Asn Ser Ser Ala Asn Ser Thr Glu Thr Leu Gln His Val Pro Ser
 50 55 60
 Asp His Thr Asn Glu Thr Ser Asn Ser Thr Val Lys Pro Pro Thr
 65 70 75
 Ser Val Ala Ser Asp Ser Ser Asn Thr Thr Val Thr Thr Met Lys
 80 85 90
 Pro Thr Ala Ala Ser Asn Thr Thr Thr Pro Gly Met Val Ser Thr
 95 100 105
 Asn Met Thr Ser Thr Thr Leu Lys Ser Thr Pro Lys Thr Thr Ser
 110 115 120
 Val Ser Gln Asn Thr Ser Gln Ile Ser Thr Ser Thr Met Thr Val

	125		130		135
Thr His Asn Ser	Ser Val Thr Ser Ala	Ala Ser Ser Val Thr	Ile		
	140		145		150
Thr Thr Thr Met	His Ser Glu Ala Lys	Lys Gly Ser Lys Phe	Asp		
	155		160		165
Thr Gly Ser Phe	Val Gly Gly Ile Val	Leu Thr Leu Gly Val	Leu		
	170		175		180
Ser Ile Leu Tyr	Ile Gly Cys Lys Met	Tyr Tyr Ser Arg Arg	Gly		
	185		190		195
Ile Arg Tyr Arg	Thr Ile Asp Glu His	Asp Ala Ile Ile			
	200		205		

<210> 417
 <211> 1728
 <212> DNA
 <213> Homo sapiens

<400> 417
 cagccgggtc ccaagcctgt gcctgagcct gagcctgagc ctgagcccga 50
 gccgggagcc ggtcgcgggg gctccgggct gtgggaccgc tgggccccca 100
 gcgatggcga ccctgtgggg aggccttctt cggcttggct ccttgctcag 150
 cctgtcgtgc ctggcgcttt ccgtgctgct gctggcgagc ctgtcagacg 200
 ccgccaagaa tttcgaggat gtcagatgta aatgtatctg ccctccctat 250
 aaagaaaatt ctgggcatat ttataataag aacatatctc agaaagattg 300
 tgattgcctt catgttgtgg agcccatgcc tgtgcggggg cctgatgtag 350
 aagcactactg tctacgctgt gaatgcaa atgaagaaag aagctctgtc 400
 acaatcaagg ttaccattat aatttatctc tccatttttg gccttctact 450
 tctgtacatg gtatatctta ctctgggtga gcccatactg aagaggcgcc 500
 tctttggaca tgcacagttg atacagagtg atgatgatat tggggatcac 550
 cagccttttg caaatgcaca cgatgtgcta gcccgctccc gcagtcgagc 600
 caacgtgctg aacaaggtag aatatgcaca gcagcgctgg aagcttcaag 650
 tccaagagca gogaaagtct gtctttgacc ggcatgttgt cctcagctaa 700
 ttgggaattg aattcaaggt gactagaaag aaacaggcag acaactggaa 750
 agaactgact gggttttgct gggtttcatt ttaatacctt gttgatttca 800
 ccaactgttg ctggaagatt caaaactgga agcaaaaact tgcttgattt 850
 ttttttcttg ttaacgtaat aatagagaca tttttaaaag cacacagctc 900
 aaagtcagcc aataagtctt ttcctatttg tgacttttac taataaaaat 950
 aaatctgcct gtaaattatc ttgaagtcct ttacctggaa caagcactct 1000

ctttttcacc acatagtttt aacttgaactt tcaagataat tttcaggggtt 1050
 tttgttggtg ttgttttttg tttgtttggt ttggtgggag aggggagggg 1100
 tgcctgggaa gtggttaaca actttttttca agtcacttta ctaaacaac 1150
 ttttgtaaag agaccttacc ttctattttc gagtttcatt tatattttgc 1200
 agtgtagcca gcctcatcaa agagctgact tactcatttg acttttgcac 1250
 tgactgtatt atctgggtat ctgctgtgtc tgcacttcat ggtaaacggg 1300
 atctaaaatg cctgggtggct tttcacaaaa agcagatttt cttcatgtac 1350
 tgtgatgtct gatgcaatgc atcctagaac aaactggcca tttgctagtt 1400
 tactctaaag actaaacata gtcttggtgt gtgtggtctt actcatcttc 1450
 tagtaccttt aaggacaaat cctaaggact tggacacttg caataaagaa 1500
 attttatttt aaaccaagc ctccctggat tgataatata tacacatttg 1550
 tcagcatttc cggctcgtgt gagaggcagc tgtttgagct ccaatatgtg 1600
 cagctttgaa ctagggctgg ggttgtgggt gcctcttctg aaaggtctaa 1650
 ccattattgg ataactggct tttttcttcc tatgtcctct ttggaatgta 1700
 acaataaaaa taatttttga aacatcaa 1728

<210> 418

<211> 198

<212> PRT

<213> Homo sapiens

<400> 418

Met	Ala	Thr	Leu	Trp	Gly	Gly	Leu	Leu	Arg	Leu	Gly	Ser	Leu	Leu
1				5					10					15
Ser	Leu	Ser	Cys	Leu	Ala	Leu	Ser	Val	Leu	Leu	Leu	Ala	Gln	Leu
				20					25					30
Ser	Asp	Ala	Ala	Lys	Asn	Phe	Glu	Asp	Val	Arg	Cys	Lys	Cys	Ile
				35					40					45
Cys	Pro	Pro	Tyr	Lys	Glu	Asn	Ser	Gly	His	Ile	Tyr	Asn	Lys	Asn
				50					55					60
Ile	Ser	Gln	Lys	Asp	Cys	Asp	Cys	Leu	His	Val	Val	Glu	Pro	Met
				65					70					75
Pro	Val	Arg	Gly	Pro	Asp	Val	Glu	Ala	Tyr	Cys	Leu	Arg	Cys	Glu
				80					85					90
Cys	Lys	Tyr	Glu	Glu	Arg	Ser	Ser	Val	Thr	Ile	Lys	Val	Thr	Ile
				95					100					105
Ile	Ile	Tyr	Leu	Ser	Ile	Leu	Gly	Leu	Leu	Leu	Leu	Tyr	Met	Val
				110					115					120
Tyr	Leu	Thr	Leu	Val	Glu	Pro	Ile	Leu	Lys	Arg	Arg	Leu	Phe	Gly
				125					130					135

His	Ala	Gln	Leu	Ile	Gln	Ser	Asp	Asp	Asp	Ile	Gly	Asp	His	Gln
			140						145					150
Pro	Phe	Ala	Asn	Ala	His	Asp	Val	Leu	Ala	Arg	Ser	Arg	Ser	Arg
			155						160					165
Ala	Asn	Val	Leu	Asn	Lys	Val	Glu	Tyr	Ala	Gln	Gln	Arg	Trp	Lys
			170						175					180
Leu	Gln	Val	Gln	Glu	Gln	Arg	Lys	Ser	Val	Phe	Asp	Arg	His	Val
			185						190					195

Val Leu Ser

<210> 419
 <211> 681
 <212> DNA
 <213> Homo sapiens

<400> 419
 gcacctgcga ccacctgtgag cagtcattggc gtactccaca gtgcagagag 50
 tcgctctggc ttctgggctt gtcttggttc tgcgtctgct gctgcccag 100
 gccttcctgt cccgcgggaa gcggcaggag ccgccgccga cacctgaagg 150
 aaaattgggc cgatttccac ctatgatgca tcatcaccag gcaccctcag 200
 atggccagac tcctggggct cgtttccaga ggtctcacct tgccgaggca 250
 tttgcaaagg ccaaaggatc aggtggagggt gctggaggag gaggtagtgg 300
 aagaggctctg atggggcaga ttattccaat ctacggtttt gggatttttt 350
 tatatatact gtacattcta tttaaggtaa gtagaatcat cctaatacata 400
 ttacatcaat gaaaatctaa tatggcgata aaaatcattg tctacattaa 450
 aacttcttat agttcataaa attatttcaa atccatcatc tctttaaatc 500
 ctgcctcctc ttcatgaggt acttaggata gccattattt cagtttcaca 550
 taagaatgtt tactcaatgt ttaagtgttt tgccccaaaa ttcacaacta 600
 acaaggcaga actaggactt gaacatggat cttttggttc ttaatccagt 650
 gagtgatata attcaatgca ctcccctgcc a 681

<210> 420
 <211> 128
 <212> PRT
 <213> Homo sapiens

<400> 420
 Met Ala Tyr Ser Thr Val Gln Arg Val Ala Leu Ala Ser Gly Leu
 1 5 10 15
 Val Leu Ala Leu Ser Leu Leu Leu Pro Lys Ala Phe Leu Ser Arg
 20 25 30
 Gly Lys Arg Gln Glu Pro Pro Thr Pro Glu Gly Lys Leu Gly
 35 40 45

Arg Phe Pro Pro Met Met His His His Gln Ala Pro Ser Asp Gly
50 55 60

Gln Thr Pro Gly Ala Arg Phe Gln Arg Ser His Leu Ala Glu Ala
65 70 75

Phe Ala Lys Ala Lys Gly Ser Gly Gly Gly Ala Gly Gly Gly Gly
80 85 90

Ser Gly Arg Gly Leu Met Gly Gln Ile Ile Pro Ile Tyr Gly Phe
95 100 105

Gly Ile Phe Leu Tyr Ile Leu Tyr Ile Leu Phe Lys Val Ser Arg
110 115 120

Ile Ile Leu Ile Ile Leu His Gln
125

<210> 421
<211> 1630
<212> DNA
<213> Homo sapiens

<400> 421
cggctcgagt gcagctgtgg ggagatttca gtgcattgcc tcccctgggt 50
gctcttcac tttgatttga aagttgagag cagcatgttt tgcccactga 100
aactcaccct gctgccagtg ttactggatt attccttggg cctgaatgac 150
ttgaatgttt ccccgctga gctaacagtc catgtgggtg attcagctct 200
gatgggatgt gttttccaga gcacagaaga caaatgtata ttcaagatag 250
actggactct gtcaccagga gagcacgcca aggacgaata tgtgctatac 300
tattactcca atctcagtgt gcctattggg cgcttccaga accgcgtaca 350
cttgatgggg gacatcttat gcaatgatgg ctctctcctg ctccaagatg 400
tgcaagaggc tgaccaggga acctatatct gtgaaatccg cctcaaaggg 450
gagagccagg tgttcaagaa ggcggtggta ctgcatgtgc ttccagagga 500
gcccaaagag ctcatgggtcc atgtgggtgg attgattcag atgggatgtg 550
ttttccagag cacagaagtg aaacacgtga ccaaggtaga atggatattt 600
tcaggacggc ggcgaaagga ggagattgta tttcgttact accacaaact 650
caggatgtct gtggagtact ccagagctg gggccacttc cagaatcgtg 700
tgaacctggt gggggacatt ttccgcaatg acggttccat catgcttcaa 750
ggagtgaggg agtcagatgg aggaaactac acctgcagta tccacctagg 800
gaacctgggtg ttcaagaaaa ccattgtgct gcatgtcagc ccggaagagc 850
ctcgaacact ggtgaccccg gcagccctga ggcctctggt cttgggtgggt 900
aatcagttgg tgatcattgt gggaattgtc tgtgccacaa tcctgctgct 950
ccctgttctg atattgatcg tgaagaagac ctgtggaaat aagagttcag 1000

tgaattctac agtcttgggtg aagaacacga agaagactaa tccagagata 1050
aaagaaaaac cctgccattt tgaaagatgt gaaggggaga aacacattta 1100
ctccccaata attgtacggg aggtgatcga ggaagaagaa ccaagtgaaa 1150
aatcagaggc cacctacatg accatgcacc cagtttggcc ttctctgagg 1200
tcagatcgga acaactcact tgaaaaaaag tcaggtgggg gaatgccaaa 1250
aacacagcaa gccttttgag aagaatggag agtcccttca tctcagcagc 1300
ggtggagact ctctcctgtg tgtgtcctgg gccactctac cagtgatttc 1350
agactcccgc tctccagct gtcctcctgt ctcatgttt ggtcaatata 1400
ctgaagatgg agaatttgga gcctggcaga gagactggac agctctggag 1450
gaacaggcct gctgagggga ggggagcatg gacttggcct ctggagtggg 1500
aactggccc tgggaaccag gctgagctga gtggcctcaa accccccgtt 1550
ggatcagacc ctctgtggg cagggttctt agtggatgag ttactgggaa 1600
gaatcagaga taaaaaccaa cccaaatcaa 1630

<210> 422
<211> 394
<212> PRT
<213> Homo sapiens

<400> 422
Met Phe Cys Pro Leu Lys Leu Ile Leu Leu Pro Val Leu Leu Asp
1 5 10 15
Tyr Ser Leu Gly Leu Asn Asp Leu Asn Val Ser Pro Pro Glu Leu
20 25 30
Thr Val His Val Gly Asp Ser Ala Leu Met Gly Cys Val Phe Gln
35 40 45
Ser Thr Glu Asp Lys Cys Ile Phe Lys Ile Asp Trp Thr Leu Ser
50 55 60
Pro Gly Glu His Ala Lys Asp Glu Tyr Val Leu Tyr Tyr Tyr Ser
65 70 75
Asn Leu Ser Val Pro Ile Gly Arg Phe Gln Asn Arg Val His Leu
80 85 90
Met Gly Asp Ile Leu Cys Asn Asp Gly Ser Leu Leu Leu Gln Asp
95 100 105
Val Gln Glu Ala Asp Gln Gly Thr Tyr Ile Cys Glu Ile Arg Leu
110 115 120
Lys Gly Glu Ser Gln Val Phe Lys Lys Ala Val Val Leu His Val
125 130 135
Leu Pro Glu Glu Pro Lys Glu Leu Met Val His Val Gly Gly Leu
140 145 150
Ile Gln Met Gly Cys Val Phe Gln Ser Thr Glu Val Lys His Val

155										160					165				
Thr	Lys	Val	Glu	Trp	Ile	Phe	Ser	Gly	Arg	Arg	Ala	Lys	Glu	Glu					
				170					175					180					
Ile	Val	Phe	Arg	Tyr	Tyr	His	Lys	Leu	Arg	Met	Ser	Val	Glu	Tyr					
				185					190					195					
Ser	Gln	Ser	Trp	Gly	His	Phe	Gln	Asn	Arg	Val	Asn	Leu	Val	Gly					
				200					205					210					
Asp	Ile	Phe	Arg	Asn	Asp	Gly	Ser	Ile	Met	Leu	Gln	Gly	Val	Arg					
				215					220					225					
Glu	Ser	Asp	Gly	Gly	Asn	Tyr	Thr	Cys	Ser	Ile	His	Leu	Gly	Asn					
				230					235					240					
Leu	Val	Phe	Lys	Lys	Thr	Ile	Val	Leu	His	Val	Ser	Pro	Glu	Glu					
				245					250					255					
Pro	Arg	Thr	Leu	Val	Thr	Pro	Ala	Ala	Leu	Arg	Pro	Leu	Val	Leu					
				260					265					270					
Gly	Gly	Asn	Gln	Leu	Val	Ile	Ile	Val	Gly	Ile	Val	Cys	Ala	Thr					
				275					280					285					
Ile	Leu	Leu	Leu	Pro	Val	Leu	Ile	Leu	Ile	Val	Lys	Lys	Thr	Cys					
				290					295					300					
Gly	Asn	Lys	Ser	Ser	Val	Asn	Ser	Thr	Val	Leu	Val	Lys	Asn	Thr					
				305					310					315					
Lys	Lys	Thr	Asn	Pro	Glu	Ile	Lys	Glu	Lys	Pro	Cys	His	Phe	Glu					
				320					325					330					
Arg	Cys	Glu	Gly	Glu	Lys	His	Ile	Tyr	Ser	Pro	Ile	Ile	Val	Arg					
				335					340					345					
Glu	Val	Ile	Glu	Glu	Glu	Glu	Pro	Ser	Glu	Lys	Ser	Glu	Ala	Thr					
				350					355					360					
Tyr	Met	Thr	Met	His	Pro	Val	Trp	Pro	Ser	Leu	Arg	Ser	Asp	Arg					
				365					370					375					
Asn	Asn	Ser	Leu	Glu	Lys	Lys	Ser	Gly	Gly	Gly	Met	Pro	Lys	Thr					
				380					385					390					

Gln Gln Ala Phe

<210> 423
 <211> 963
 <212> DNA
 <213> Homo sapiens

<400> 423
 ctatgaagaa gcttcctgga aaacaataag caaaggaaaa caaatgtgtc 50
 ccattcaca tggttctacc ctactaaaga caggaagatc ataaactgac 100
 agatactgaa attgtaagag ttggaaacta cattttgcaa agtcattgaa 150
 ctctgagctc agttgcagta ctcggaagc catgcaggat gaagatggat 200

acatcacctt aaatattaaa actcggaaac cagctctcgt ctccgttggc 250
 cctgcatcct cctcctgggtg gcggtgtgatg gctttgattc tgctgaccc 300
 gtgcgtgggg atggttgtcg ggctgggtggc tctggggatt tgggtctgtca 350
 tgcagcgcaa ttacctacaa gatgagaatg aaaatcgcac aggaactctg 400
 caacaattag caaagcgctt ctgtcaatat gtggtaaaac aatcagaact 450
 aaagggcact ttcaaagggtc ataaatgcag cccctgtgac acaaactgga 500
 gatattatgg agatagctgc tatgggttct tcaggcaciaa cttaacatgg 550
 gaagagagta agcagtactg cactgacatg aatgctactc tcctgaagat 600
 tgacaaccgg aacattgtgg agtacatcaa agccaggact catttaattc 650
 gttgggtcgg attatctcgc cagaagtcga atgaggtctg gaagtgggag 700
 gatggctcgg ttatctcaga aaatatgttt gagtttttgg aagatggaaa 750
 aggaaatatg aattgtgctt attttcataa tgggaaaatg caccctacct 800
 tctgtgagaa caaacattat ttaatgtgtg agaggaaggc tggcatgacc 850
 aaggtggacc aactacctta atgcaaagag gtggacagga taacacagat 900
 aagggtttta ttgtacaata aaagatatgt atgaatgcat cagtagctga 950
 aaaaaaaaaa aaa 963

<210> 424
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 424
 Met Gln Asp Glu Asp Gly Tyr Ile Thr Leu Asn Ile Lys Thr Arg
 1 5 10 15
 Lys Pro Ala Leu Val Ser Val Gly Pro Ala Ser Ser Ser Trp Trp
 20 25 30
 Arg Val Met Ala Leu Ile Leu Leu Ile Leu Cys Val Gly Met Val
 35 40 45
 Val Gly Leu Val Ala Leu Gly Ile Trp Ser Val Met Gln Arg Asn
 50 55 60
 Tyr Leu Gln Asp Glu Asn Glu Asn Arg Thr Gly Thr Leu Gln Gln
 65 70 75
 Leu Ala Lys Arg Phe Cys Gln Tyr Val Val Lys Gln Ser Glu Leu
 80 85 90
 Lys Gly Thr Phe Lys Gly His Lys Cys Ser Pro Cys Asp Thr Asn
 95 100 105
 Trp Arg Tyr Tyr Gly Asp Ser Cys Tyr Gly Phe Phe Arg His Asn
 110 115 120
 Leu Thr Trp Glu Glu Ser Lys Gln Tyr Cys Thr Asp Met Asn Ala

	125		130		135
Thr Leu Leu Lys	Ile Asp Asn Arg Asn	Ile Val Glu Tyr Ile	Lys		
	140	145	150		
Ala Arg Thr His	Leu Ile Arg Trp Val	Gly Leu Ser Arg Gln	Lys		
	155	160	165		
Ser Asn Glu Val	Trp Lys Trp Glu Asp	Gly Ser Val Ile Ser	Glu		
	170	175	180		
Asn Met Phe Glu	Phe Leu Glu Asp Gly	Lys Gly Asn Met Asn	Cys		
	185	190	195		
Ala Tyr Phe His	Asn Gly Lys Met His	Pro Thr Phe Cys Glu	Asn		
	200	205	210		
Lys His Tyr Leu	Met Cys Glu Arg Lys	Ala Gly Met Thr Lys	Val		
	215	220	225		

Asp Gln Leu Pro

<210> 425
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 425
 tgcagcccct gtgacacaaa ctgg 24

<210> 426
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 426
 ctgagataac cgagccatcc tcccac 26

<210> 427
 <211> 49
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 427
 gcttcctgac actaaggctg tctgctagtc agaattgcct caaaaagag 49

<210> 428
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 428
 ccaccaatgg cagccccacc t 21

 <210> 429
 <211> 17
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 429
 gactgccctc cctgcca 17

 <210> 430
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 430
 caaaaagcct ggaagtcttc aaag 24

 <210> 431
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 431
 cagctggact gcaggtgcta 20

 <210> 432
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 432
 cagtgagcac agcaagtgtc ct 22

 <210> 433
 <211> 28
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 433
 ggccacctcc ttgagtcttc agttccct 28

 <210> 434
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 434
caactactgg ctaaagctgg tgaa 24

<210> 435
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 435
cctttctgta taggtgatac ccaatga 27

<210> 436
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 436
tggccatccc taccagaggc aaaa 24

<210> 437
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 437
ctgaagacga cgcgattac ta 22

<210> 438
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 438
ggcagaaatg ggaggcaga 19

<210> 439
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 439
tgctctgttg gctacggctt tagtccctag 30

<210> 440
<211> 22

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 440
 agcagcagcc atgtagaatg aa 22

 <210> 441
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 441
 aatacgaaca gtgcacgctg at 22

 <210> 442
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 442
 tccagagagc caagcacggc aga 23

 <210> 443
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 443
 tctagccagc ttggctccaa ta 22

 <210> 444
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 444
 cctggctcta gcaccaactc ata 23

 <210> 445
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 445
 tcagtggccc taaggagatg ggcct 25

<210> 446
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 446
caggatacag tgggaatctt gaga 24

<210> 447
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 447
cctgaagggc ttggagctta gt 22

<210> 448
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 448
tctttggcca tttcccatgg ctca 24

<210> 449
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 449
cccatggcga ggaggaat 18

<210> 450
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 450
tgcgtacgtg tgccttcag 19

<210> 451
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 451
cagcacccca ggcagtctgt gtgt 24

<210> 452
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 452
aacgtgctac acgaccagtg tact 24

<210> 453
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 453
cacagcatat tcagatgact aaatcca 27

<210> 454
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 454
ttgttttagtt ctccaccgtg tctccacaga a 31

<210> 455
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 455
tgtcagaatg caacctggct t 21

<210> 456
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 456
tgatgtgcct ggctcagaac 20

<210> 457
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

 <400> 457
 tgcacctaga tgtccccagc accc 24

 <210> 458
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 458
 aagatgcgcc aggcttctta 20

 <210> 459
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 459
 ctctgtacg gtctgtcac ttat 24

 <210> 460
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 460
 tggctgtcag tccagtgtgc atgg 24

 <210> 461
 <211> 29
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 461
 gcatagggat agataagatc ctgctttat 29

 <210> 462
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 462
 caaattaaag taccatcag gagagaa 27

 <210> 463
 <211> 37

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 463
 aagttgctaa atatatacat tatctgcgcc aagtcca 37

 <210> 464
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 464
 gtgctgcccc caattcatga 20

 <210> 465
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 465
 gtccttggtg tgggtctgaa ttatat 26

 <210> 466
 <211> 31
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 466
 actctctgca cccacagtc accactatct c 31

 <210> 467
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 467
 ctgaggaacc agccatgtct ct 22

 <210> 468
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 468
 gaccagatgc aggtacagga tga 23

<210> 469
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 469
 ctgccccttc agtgatgccca acctt 25

 <210> 470
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 470
 ggggtggaggc tcactgagta ga 22

 <210> 471
 <211> 28
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 471
 caatacaggc aatgaaactc tgcttctt 28

 <210> 472
 <211> 36
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 472
 tcctcttaag cataggccat tttctcagtt tagaca 36

 <210> 473
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 473
 ggtggtcttg cttggtctca c 21

 <210> 474
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

<400> 474
ccgtcgttca gcaacatgac 20

<210> 475
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 475
accgcctacc gctgtgccca 20

<210> 476
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 476
cagtaaaacc acaggctgga ttt 23

<210> 477
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 477
cctgagagca agaaggttga gaat 24

<210> 478
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 478
tagacagga ccatggcccg ca 22

<210> 479
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 479
tgggctgtag aagagttggt g 21

<210> 480
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 480
tccacacttg gccagtttat 20

<210> 481
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 481
cccaacttct cccttttggga ccct 24

<210> 482
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 482
gtcccttcac tgtttagagc atga 24

<210> 483
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 483
actctcccc tcaacagcct cctgag 26

<210> 484
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 484
gtggtcaggg cagatccttt 20

<210> 485
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 485
acagatccag gagagactcc aca 23

<210> 486
<211> 21

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 486
 agcggcgctc ccagcctgaa t 21

 <210> 487
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 487
 catgattggc cctcagttcc atc 23

 <210> 488
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 488
 atagagggcct cccagaagtg 20

 <210> 489
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 489
 cagggccttc agggccttca c 21

 <210> 490
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 490
 gctcagccaa acactgtca 19

 <210> 491
 <211> 17
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 491
 ggggcctga cagtgtt 17

<210> 492
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 492
ctgagccgag actggagcat ctacac 26

<210> 493
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 493
gtgggcagcg tcttgctc 17

<210> 494
<211> 1231
<212> DNA
<213> Homo Sapien

<400> 494
cccacgcgtc cgcgcagtcg cgcagttctg cctccgcctg ccagtctcgc 50
ccgcgatccc ggcccggggc tgtggcgtcg actccgaccc aggcagccag 100
cagcccgcgc gggagccgga ccgccgccgg aggagctcgg acggcatgct 150
gagccccctc ctttgctgaa gcccgagtgc ggagaagccc gggcaaacgc 200
aggctaagga gaccaaagcg gcgaagtgcg gagacagcgg acaagcagcg 250
gaggagaagg aggaggaggc gaaccacagag aggggcagca aaagaagcgg 300
tggtggtggg cgtcgtggcc atggcgggcg ctatcgccag ctgctcatc 350
cgtcagaaga ggcaagcccc cgagcgcgag aaatccaacg cctgcaagtg 400
tgtcagcagc cccagcaaag gcaagaccag ctgcgacaaa aacaagttaa 450
atgtcttttc cggggtcaaa ctcttcggct ccaagaagag gcgcagaaga 500
agaccagagc ctcagcttaa gggatatagt accaagctat acagccgaca 550
aggctaccac ttgcagctgc aggcggatgg aaccattgat ggcaccaaag 600
atgaggacag cacttacact ctgtttaacc tcatccctgt gggctctgca 650
gtggtggcta tccaaggagt tcaaaccaag ctgtacttgg caatgaacag 700
tgagggatac ttgtacacct cggaactttt cacacctgag tgcaaattca 750
aagaatcagt gtttgaaaat tattatgtga catattcatc aatgatatac 800
cgtcagcagc agtcaggccg aggggtggtat ctgggtctga acaaagaagg 850
agagatcatg aaaggcaacc atgtgaagaa gaacaagcct gcagctcatt 900

ttctgcctaa accactgaaa gtggccatgt acaaggagcc atcactgcac 950
gatctcacgg agttctcccg atctggaagc gggaccccaa ccaagagcag 1000
aagtgtctct ggcgtgctga acggaggcaa atccatgagc cacaatgaat 1050
caacgtagcc agtgagggca aaagaagggc tctgtaacag aaccttacct 1100
ccagggtctg ttgaattctt ctagcagtcc ttcacccaaa agttcaaatt 1150
tgtcagtgc atttaccaaa caaacaggca gagttcacta ttctatctgc 1200
cattagacct tcttatcatc cataactaaag c 1231

<210> 495
<211> 245
<212> PRT
<213> Homo Sapien

<400> 495
Met Ala Ala Ala Ile Ala Ser Ser Leu Ile Arg Gln Lys Arg Gln
1 5 10 15
Ala Arg Glu Arg Glu Lys Ser Asn Ala Cys Lys Cys Val Ser Ser
20 25 30
Pro Ser Lys Gly Lys Thr Ser Cys Asp Lys Asn Lys Leu Asn Val
35 40 45
Phe Ser Arg Val Lys Leu Phe Gly Ser Lys Lys Arg Arg Arg Arg
50 55 60
Arg Pro Glu Pro Gln Leu Lys Gly Ile Val Thr Lys Leu Tyr Ser
65 70 75
Arg Gln Gly Tyr His Leu Gln Leu Gln Ala Asp Gly Thr Ile Asp
80 85 90
Gly Thr Lys Asp Glu Asp Ser Thr Tyr Thr Leu Phe Asn Leu Ile
95 100 105
Pro Val Gly Leu Arg Val Val Ala Ile Gln Gly Val Gln Thr Lys
110 115 120
Leu Tyr Leu Ala Met Asn Ser Glu Gly Tyr Leu Tyr Thr Ser Glu
125 130 135
Leu Phe Thr Pro Glu Cys Lys Phe Lys Glu Ser Val Phe Glu Asn
140 145 150
Tyr Tyr Val Thr Tyr Ser Ser Met Ile Tyr Arg Gln Gln Gln Ser
155 160 165
Gly Arg Gly Trp Tyr Leu Gly Leu Asn Lys Glu Gly Glu Ile Met
170 175 180
Lys Gly Asn His Val Lys Lys Asn Lys Pro Ala Ala His Phe Leu
185 190 195
Pro Lys Pro Leu Lys Val Ala Met Tyr Lys Glu Pro Ser Leu His
200 205 210
Asp Leu Thr Glu Phe Ser Arg Ser Gly Ser Gly Thr Pro Thr Lys

	215		220		225
Ser Arg Ser Val	Ser Gly Val Leu Asn Gly Gly Lys Ser Met Ser				
	230		235		240
His Asn Glu Ser Thr					
	245				

<210> 496
 <211> 1471
 <212> DNA
 <213> Homo Sapien

<400> 496
 ccaggatgga gctggggcct gtatagccat attattgttc tatgctacta 50
 gacatggggg ggacttggtg aaaaaggat tatccagcca gagggctctgg 100
 gagccctgtc ttactgaacc tgggcaacct ggatattctg agacatattt 150
 tggggggatt tcagtgaaaa aagtggggga tccctccat ttagagtgtg 200
 gcaaaggaaa aaacaccaag gttgggttcc ttctgacat tggcagtgcc 250
 ccagtagggg tgggatgagc gaatattccc aaagctaaag tcccacaccc 300
 tgtagattac aagagtggat ttggcaggag tgtgccccaa aatacagtgg 350
 aaaggtgcct gaagatattt aaaccacgtc ttggaaattt agtgggtctt 400
 ggctttggga taggtgaagt gaggacagac actggagagg agggaaaggg 450
 gacgttttca ataggaggca aaactcgagg gtgggatcca ctgaggagta 500
 cataggctgc tggatctggt ggagccagca ctgggcccac ggggtggtaac 550
 tggctgctgt ggaggggggt acgtgagggg ggggtctggg gcttatactc 600
 aggtcctgtg ggtggggcag cgagtcgggg cctgagcgtc aagagcatgc 650
 cctagtgagc gggctcctct gggggagccc agcgcgctcc gggcgctgc 700
 cggtttgggg gtgtctcctc ccggggcgct atggcgggcg tggccagtag 750
 cctgatccgg cagaagcggg aggtccgcga gcccgggggc agccggccgg 800
 tgtcggcgca gcggcgctg tgtccccg cgaccaagtc cctttgccag 850
 aagcagctcc tcatcctgct gtccaagggt cgactgtgcg gggggcggcc 900
 cgcgcgggcg gaccgcggcc cggagcctca gctcaaaggc atcgtcacca 950
 aactgttctg ccgccagggt ttctacctcc aggcgaatcc cgacggaagc 1000
 atccagggca cccagagga taccagctcc ttcaacct tcaacctgat 1050
 ccctgtgggc ctccgtgtgg tcaccatcca gagcgccaag ctgggtcact 1100
 acatggccat gaatgctgag ggactgctct acagttcgcc gcatttcaca 1150
 gctgagtgtc gctttaagga gtgtgtcttt gagaattact acgtcctgta 1200
 cgctctgct ctctaccgcc agcgtcgttc tggccggggc tggtagctcg 1250

gcctggacaa ggagggccag gtcatgaagg gaaaccgagt taagaagacc 1300
aaggcagctg ccactttct gcccaagctc ctggaggtgg ccatgtacca 1350
ggagccttct ctccacagtg tccccgaggc ctcccttcc agtccccctg 1400
ccccctgaaa tgtagtccct ggactggagg ttccctgcac tccagtgag 1450
ccagccacca ccacaacctg t 1471

<210> 497
<211> 225
<212> PRT
<213> Homo Sapien

<400> 497
Met Ala Ala Leu Ala Ser Ser Leu Ile Arg Gln Lys Arg Glu Val
1 5 10 15
Arg Glu Pro Gly Gly Ser Arg Pro Val Ser Ala Gln Arg Arg Val
20 25 30
Cys Pro Arg Gly Thr Lys Ser Leu Cys Gln Lys Gln Leu Leu Ile
35 40 45
Leu Leu Ser Lys Val Arg Leu Cys Gly Gly Arg Pro Ala Arg Pro
50 55 60
Asp Arg Gly Pro Glu Pro Gln Leu Lys Gly Ile Val Thr Lys Leu
65 70 75
Phe Cys Arg Gln Gly Phe Tyr Leu Gln Ala Asn Pro Asp Gly Ser
80 85 90
Ile Gln Gly Thr Pro Glu Asp Thr Ser Ser Phe Thr His Phe Asn
95 100 105
Leu Ile Pro Val Gly Leu Arg Val Val Thr Ile Gln Ser Ala Lys
110 115 120
Leu Gly His Tyr Met Ala Met Asn Ala Glu Gly Leu Leu Tyr Ser
125 130 135
Ser Pro His Phe Thr Ala Glu Cys Arg Phe Lys Glu Cys Val Phe
140 145 150
Glu Asn Tyr Tyr Val Leu Tyr Ala Ser Ala Leu Tyr Arg Gln Arg
155 160 165
Arg Ser Gly Arg Ala Trp Tyr Leu Gly Leu Asp Lys Glu Gly Gln
170 175 180
Val Met Lys Gly Asn Arg Val Lys Lys Thr Lys Ala Ala Ala His
185 190 195
Phe Leu Pro Lys Leu Leu Glu Val Ala Met Tyr Gln Glu Pro Ser
200 205 210
Leu His Ser Val Pro Glu Ala Ser Pro Ser Ser Pro Pro Ala Pro
215 220 225

<210> 498
<211> 744

<212> DNA
<213> Homo Sapien

<400> 498

```
atggccgcgg ccatcgctag cggtttgatc cgccagaagc ggcaggcgcg 50
ggagcagcac tgggaccggc cgtctgccag caggaggcgg agcagcccca 100
gcaagaaccg cgggctctgc aacggcaacc tgggtgatat cttctccaaa 150
gtgcgcatct tcggcctcaa gaagcgcagg ttgcggggcc aagatcccca 200
gctcaagggt atagtgacca gggttatattg caggcaaggc tactacttgc 250
aaatgcaccc cgatggagct ctcgatggaa ccaaggatga cagcactaat 300
tctacactct tcaacctcat accagtggga ctacgtgttg ttgccatcca 350
gggagtgaac acagggttgt atatagccat gaatggagaa gggtacctct 400
acccatcaga actttttacc cctgaatgca agtttaaaga atctgttttt 450
gaaaattatt atgtaataa ctcatccatg ttgtacagac aacaggaatc 500
tggtagagcc tggtttttgg gattaaataa ggaagggcaa gctatgaaag 550
ggaacagagt aaagaaaacc aaaccagcag ctcattttct acccaagcca 600
ttggaagttg ccatgtaccg agaaccatct ttgcatgatg ttgggggaaac 650
ggtcccgaag cctgggggtga cgccaagtaa aagcacaagt gcgtctgcaa 700
taatgaatgg aggcaaacca gtcaacaaga gtaagacaac atag 744
```

<210> 499

<211> 247

<212> PRT

<213> Homo Sapien

<400> 499

```
Met Ala Ala Ala Ile Ala Ser Gly Leu Ile Arg Gln Lys Arg Gln
 1                      5                      10          15
Ala Arg Glu Gln His Trp Asp Arg Pro Ser Ala Ser Arg Arg Arg
                20                      25          30
Ser Ser Pro Ser Lys Asn Arg Gly Leu Cys Asn Gly Asn Leu Val
                35                      40          45
Asp Ile Phe Ser Lys Val Arg Ile Phe Gly Leu Lys Lys Arg Arg
                50                      55          60
Leu Arg Arg Gln Asp Pro Gln Leu Lys Gly Ile Val Thr Arg Leu
                65                      70          75
Tyr Cys Arg Gln Gly Tyr Tyr Leu Gln Met His Pro Asp Gly Ala
                80                      85          90
Leu Asp Gly Thr Lys Asp Asp Ser Thr Asn Ser Thr Leu Phe Asn
                95                      100         105
Leu Ile Pro Val Gly Leu Arg Val Val Ala Ile Gln Gly Val Lys
                110                     115         120
```

Thr	Gly	Leu	Tyr	Ile	Ala	Met	Asn	Gly	Glu	Gly	Tyr	Leu	Tyr	Pro	
				125					130					135	
Ser	Glu	Leu	Phe	Thr	Pro	Glu	Cys	Lys	Phe	Lys	Glu	Ser	Val	Phe	
				140					145					150	
Glu	Asn	Tyr	Tyr	Val	Ile	Tyr	Ser	Ser	Met	Leu	Tyr	Arg	Gln	Gln	
				155					160					165	
Glu	Ser	Gly	Arg	Ala	Trp	Phe	Leu	Gly	Leu	Asn	Lys	Glu	Gly	Gln	
				170					175					180	
Ala	Met	Lys	Gly	Asn	Arg	Val	Lys	Lys	Thr	Lys	Pro	Ala	Ala	His	
				185					190					195	
Phe	Leu	Pro	Lys	Pro	Leu	Glu	Val	Ala	Met	Tyr	Arg	Glu	Pro	Ser	
				200					205					210	
Leu	His	Asp	Val	Gly	Glu	Thr	Val	Pro	Lys	Pro	Gly	Val	Thr	Pro	
				215					220					225	
Ser	Lys	Ser	Thr	Ser	Ala	Ser	Ala	Ile	Met	Asn	Gly	Gly	Lys	Pro	
				230					235					240	
Val	Asn	Lys	Ser	Lys	Thr	Thr									
				245											

<210> 500
 <211> 2906
 <212> DNA
 <213> Homo Sapien

<400> 500
 ggggagagga attgaccatg taaaaggaga cttttttttt tgggtggtggt 50
 ggctgttggg tgccttgcaa aatgaagga tgcaggacgc agctttctcc 100
 tggaaccgaa cgcaatggat aaactgattg tgcaagagag aaggaagaac 150
 gaagcttttt cttgtgagcc ctggatctta acacaaatgt gtatatgtgc 200
 acacagggag cattcaagaa tgaaataaac cagagttaga cccgcggggg 250
 ttggtgtggt ctgacataaa taaataatct taaagcagct gttcccctcc 300
 ccacccccaa aaaaaaggat gattggaaat gaagaaccga ggattcaca 350
 agaaaaaagt atgttcattt ttctctataa aggagaaagt gagccaagga 400
 gatatttttg gaatgaaaag tttggggctt ttttagtaaa gtaaagaact 450
 ggtgtggtgg tgttttcctt tctttttgaa tttcccacaa gaggagagga 500
 aattaataat acatctgcaa agaaatttca gagaagaaaa gttgaccgcg 550
 gcagattgag gcattgattg ggggagagaa accagcagag cacagttgga 600
 tttgtgcta tggtgactaa aattgacgga taattgcagt tggatttttc 650
 ttcacaaacc tccttttttt taaattttta ttctttttgg tatcaagatc 700
 atgcgttttc tcttgttctt aaccacctgg atttccatct ggatgttgct 750

gtgatcagtc tgaaatacaa ctgtttgaat tccagaagga ccaacaccag 800
 ataaattatg aatggtgaac aagatgacct tacatccaca gcagataatg 850
 ataggtccta ggtttaacag ggccctatct gacccctgc ttgtggtgct 900
 gctggctctt caacttcttg tgggtggctgg tctggtgcgg gctcagacct 950
 gcccttctgt gtgctcctgc agcaaccagt tcagcaaggt gatttgtggt 1000
 cggaaaaacc tgcgtgaggt tccggatggc atctccacca acacacggct 1050
 gctgaacctc catgagaacc aaatccagat catcaaagtg aacagcttca 1100
 agcacttgag gcacttgga atcctacagt tgagtaggaa ccatatcaga 1150
 accattgaaa ttggggcttt caatggtctg gcgaacctca aactctgga 1200
 actctttgac aatcgtctta ctaccatccc gaatggagct tttgtatact 1250
 tgtctaaact gaaggagctc tgggtgcgaa acaaccccat tgaaagcatc 1300
 ccttcttatg cttttaacag aattccttct ttgcgcgcac tagacttagg 1350
 ggaattgaaa agactttcat acatctcaga aggtgccttt gaaggtctgt 1400
 ccaacttgag gtatttgaac cttgccatgt gcaaccttcg ggaaatccct 1450
 aacctcacac cgctcataaa actagatgag ctggatcttt ctgggaatca 1500
 tttatctgcc atcaggcctg gctctttcca gggtttgatg caccttcaaa 1550
 aactgtggat gatacagtc cagattcaag tgattgaacg gaatgccttt 1600
 gacaaccttc agtcaactag ggagatcaac ctggcacaca ataactaac 1650
 attactgcct catgacctct tcactccctt gcatcatcta gagcggatac 1700
 atttacatca caacccttg aactgtaact gtgacatact gtggctcagc 1750
 tgggtggataa aagacatggc ccctcgaac acagcttggt gtgcccgggtg 1800
 taacactcct cccaatctaa aggggaggta cattggagag ctcgaccaga 1850
 attacttcac atgctatgct ccggtgattg tggagcccc tgcagacctc 1900
 aatgtcactg aaggcatggc agctgagctg aaatgtcggg cctccacatc 1950
 cctgacatct gtatcttgga ttactccaaa tggaacagtc atgacacatg 2000
 gggcgtacaa agtgcggata gctgtgctca gtgatggtac gttaaatttc 2050
 acaaatgtaa ctgtgcaaga tacaggcatg tacacatgta tggtagtaaa 2100
 ttccgttggg aatactactg cttcagccac cctgaatgtt actgcagcaa 2150
 ccaactactc tttctcttac ttttcaaccg tcacagtaga gactatggaa 2200
 ccgtctcagg atgaggcacg gaccacagat aacaatgtgg gtccactcc 2250
 agtggctgac tgggagacca ccaatgtgac cacctctctc acaccacaga 2300
 gcacaaggct gacagagaaa accttcacca tcccagtgac tgatataaac 2350

agtgggatcc caggaattga tgagggtcatg aagactacca aaatcatcat 2400
 tgggtgtttt gtggccatca cactcatggc tgcagtgatg ctggtcattt 2450
 tctacaagat gaggaagcag caccatcggc aaaaccatca cgccccaaca 2500
 aggactgttg aaattattaa tgtggatgat gagattacgg gagacacacc 2550
 catggaaagc cacctgcccc tgcctgctat cgagcatgag cacctaaatc 2600
 actataactc atacaaatct cccttcaacc acacaacaac agttaacaca 2650
 ataaattcaa tacacagttc agtgcattgaa ccgttattga tccgaatgaa 2700
 ctctaaagac aatgtacaag agactcaaat ctaaaacatt tacagagtta 2750
 caaaaaaaca acaatcaaaa aaaaagacag tttattaaaa atgacacaaa 2800
 tgactgggct aaatctactg tttcaaaaaa gtgtctttac aaaaaaaca 2850
 aaaagaaaag aaatttatit attaaaaatt ctattgtgat ctaaagcaga 2900
 caaaaa 2906

<210> 501
 <211> 640
 <212> PRT
 <213> Homo Sapien

<400> 501
 Met Leu Asn Lys Met Thr Leu His Pro Gln Gln Ile Met Ile Gly
 1 5 10 15
 Pro Arg Phe Asn Arg Ala Leu Phe Asp Pro Leu Leu Val Val Leu
 20 25 30
 Leu Ala Leu Gln Leu Leu Val Val Ala Gly Leu Val Arg Ala Gln
 35 40 45
 Thr Cys Pro Ser Val Cys Ser Cys Ser Asn Gln Phe Ser Lys Val
 50 55 60
 Ile Cys Val Arg Lys Asn Leu Arg Glu Val Pro Asp Gly Ile Ser
 65 70 75
 Thr Asn Thr Arg Leu Leu Asn Leu His Glu Asn Gln Ile Gln Ile
 80 85 90
 Ile Lys Val Asn Ser Phe Lys His Leu Arg His Leu Glu Ile Leu
 95 100 105
 Gln Leu Ser Arg Asn His Ile Arg Thr Ile Glu Ile Gly Ala Phe
 110 115 120
 Asn Gly Leu Ala Asn Leu Asn Thr Leu Glu Leu Phe Asp Asn Arg
 125 130 135
 Leu Thr Thr Ile Pro Asn Gly Ala Phe Val Tyr Leu Ser Lys Leu
 140 145 150
 Lys Glu Leu Trp Leu Arg Asn Asn Pro Ile Glu Ser Ile Pro Ser
 155 160 165

Tyr Ala Phe Asn Arg Ile Pro Ser Leu Arg Arg Leu Asp Leu Gly	170	175	180
Glu Leu Lys Arg Leu Ser Tyr Ile Ser Glu Gly Ala Phe Glu Gly	185	190	195
Leu Ser Asn Leu Arg Tyr Leu Asn Leu Ala Met Cys Asn Leu Arg	200	205	210
Glu Ile Pro Asn Leu Thr Pro Leu Ile Lys Leu Asp Glu Leu Asp	215	220	225
Leu Ser Gly Asn His Leu Ser Ala Ile Arg Pro Gly Ser Phe Gln	230	235	240
Gly Leu Met His Leu Gln Lys Leu Trp Met Ile Gln Ser Gln Ile	245	250	255
Gln Val Ile Glu Arg Asn Ala Phe Asp Asn Leu Gln Ser Leu Val	260	265	270
Glu Ile Asn Leu Ala His Asn Asn Leu Thr Leu Leu Pro His Asp	275	280	285
Leu Phe Thr Pro Leu His His Leu Glu Arg Ile His Leu His His	290	295	300
Asn Pro Trp Asn Cys Asn Cys Asp Ile Leu Trp Leu Ser Trp Trp	305	310	315
Ile Lys Asp Met Ala Pro Ser Asn Thr Ala Cys Cys Ala Arg Cys	320	325	330
Asn Thr Pro Pro Asn Leu Lys Gly Arg Tyr Ile Gly Glu Leu Asp	335	340	345
Gln Asn Tyr Phe Thr Cys Tyr Ala Pro Val Ile Val Glu Pro Pro	350	355	360
Ala Asp Leu Asn Val Thr Glu Gly Met Ala Ala Glu Leu Lys Cys	365	370	375
Arg Ala Ser Thr Ser Leu Thr Ser Val Ser Trp Ile Thr Pro Asn	380	385	390
Gly Thr Val Met Thr His Gly Ala Tyr Lys Val Arg Ile Ala Val	395	400	405
Leu Ser Asp Gly Thr Leu Asn Phe Thr Asn Val Thr Val Gln Asp	410	415	420
Thr Gly Met Tyr Thr Cys Met Val Ser Asn Ser Val Gly Asn Thr	425	430	435
Thr Ala Ser Ala Thr Leu Asn Val Thr Ala Ala Thr Thr Thr Pro	440	445	450
Phe Ser Tyr Phe Ser Thr Val Thr Val Glu Thr Met Glu Pro Ser	455	460	465
Gln Asp Glu Ala Arg Thr Thr Asp Asn Asn Val Gly Pro Thr Pro	470	475	480

Val	Val	Asp	Trp	Glu	Thr	Thr	Asn	Val	Thr	Thr	Ser	Leu	Thr	Pro	485	490	495
Gln	Ser	Thr	Arg	Ser	Thr	Glu	Lys	Thr	Phe	Thr	Ile	Pro	Val	Thr	500	505	510
Asp	Ile	Asn	Ser	Gly	Ile	Pro	Gly	Ile	Asp	Glu	Val	Met	Lys	Thr	515	520	525
Thr	Lys	Ile	Ile	Ile	Gly	Cys	Phe	Val	Ala	Ile	Thr	Leu	Met	Ala	530	535	540
Ala	Val	Met	Leu	Val	Ile	Phe	Tyr	Lys	Met	Arg	Lys	Gln	His	His	545	550	555
Arg	Gln	Asn	His	His	Ala	Pro	Thr	Arg	Thr	Val	Glu	Ile	Ile	Asn	560	565	570
Val	Asp	Asp	Glu	Ile	Thr	Gly	Asp	Thr	Pro	Met	Glu	Ser	His	Leu	575	580	585
Pro	Met	Pro	Ala	Ile	Glu	His	Glu	His	Leu	Asn	His	Tyr	Asn	Ser	590	595	600
Tyr	Lys	Ser	Pro	Phe	Asn	His	Thr	Thr	Thr	Val	Asn	Thr	Ile	Asn	605	610	615
Ser	Ile	His	Ser	Ser	Val	His	Glu	Pro	Leu	Leu	Ile	Arg	Met	Asn	620	625	630
Ser	Lys	Asp	Asn	Val	Gln	Glu	Thr	Gln	Ile						635	640	

<210> 502
 <211> 2458
 <212> DNA
 <213> Homo Sapien

<400> 502
 gcgccgggag cccatctgcc ccaggggca cggggcgcg ggccggctcc 50
 cgcccggcac atggctgcag ccacctcgcg cgcaccccca ggccgcccgc 100
 ccagctcgcc cgaggtccgt cggaggcgcc cggccgcccc ggagccaagc 150
 agcaactgag cggggaagcg cccgcgtccg gggatcgga tgtccctcct 200
 ctttctctc ttgctagttt cctactatgt tggaaccttg gggactcaca 250
 ctgagatcaa gagagtggca gaggaaaagg tcactttgcc ctgccaccat 300
 caactggggc ttccagaaaa agacactctg gatattgaat ggctgctcac 350
 cgataatgaa gggaacaaaa aagtggatgat cacttactcc agtcgtcatg 400
 tctacaataa cttgactgag gaacagaagg gccgagtggc ctttgcttcc 450
 aatttcttgg caggagatgc ctcttgcag attgaacctc tgaagcccag 500
 tgatgagggc cggtagacct gtaagggtta gaattcagg cgctacgtgt 550
 ggagccatgt catcttaaaa gtcttagtga gaccatccaa gcccaagtgt 600

gagttggaag gagagctgac agaaggaagt gacctgactt tgcagtgtga 650
 gtcattcctct ggcacagagc ccatttgtta ttactggcag cgaatccgag 700
 agaaagaggg agaggatgaa cgtctgcctc ccaaattctag gattgactac 750
 aaccaccctg gacgagttct gctgcagaat cttaccatgt cctactctgg 800
 actgtaccag tgcacagcag gcaacgaagc tgggaaggaa agctgtgtgg 850
 tgcgagtaac tgtacagtat gtacaaagca tcggcatggg tgcaggagca 900
 gtgacaggca tagtggctgg agccctgctg attttcctct tgggtgtggct 950
 gctaattccga aggaaagaca aagaaagata tgaggaagaa gagagaccta 1000
 atgaaattcg agaagatgct gaagctccaa aagcccgctt tgtgaaacct 1050
 agctcctctt cctcaggctc tcggagctca cgctctggtt cttcctccac 1100
 tcgctccaca gcaaatagtg cctcacgcag ccagcggaca ctgtcaactg 1150
 acgcagcacc ccagccaggg ctggccaccc aggcatacag cctagtgggg 1200
 ccagagggtga gaggttctga accaaagaaa gtccaccatg ctaatctgac 1250
 caaagcagaa accacacca gcatgatccc cagccagagc agagccttcc 1300
 aaacggtctg aattacaatg gacttgactc ccacgcttct ctaggagtca 1350
 gggctcttgg actcttctcg tcattggagc tcaagtcacc agccacacaa 1400
 ccagatgaga ggtcatctaa gtagcagtga gcattgcacg gaacagattc 1450
 agatgagcat tttccttata caataccaaa caagcaaaag gatgtaagct 1500
 gattcatctg taaaaaggca tcttattgtg ccttttagacc agagtaaggg 1550
 aaagcaggag tccaaatcta tttgttgacc aggacctgtg gtgagaaggt 1600
 tggggaaagg tgaggatgaat atacctaaaa cttttaatgt gggatatttt 1650
 gtatcagtgc tttgattcac aattttcaag aggaaatggg atgctgtttg 1700
 taaattttct atgcatttct gcaaacttat tggattatta gttattcaga 1750
 cagtcaagca gaacccacag ccttattaca cctgtctaca ccatgtactg 1800
 agctaaccac ttctaagaaa ctccaaaaaa ggaaacatgt gtcttctatt 1850
 ctgacttaac ttcatttgtc ataaggtttg gatattaatt tcaaggggag 1900
 ttgaaatagt gggagatgga gaagagtga tgagtttctc ccactctata 1950
 ctaatctcac tatttgtatt gagcccaaaa taactatgaa aggagacaaa 2000
 aatttgtgac aaaggattgt gaagagcttt ccatcttcat gatgttatga 2050
 ggattgttga caaacattag aaatatataa tggagcaatt gtggatttcc 2100
 cctcaaatca gatgcctcta aggactttcc tgctagatat ttctggaagg 2150
 agaaaatata acatgtcatt tatcaacgtc cttagaaaga attcttctag 2200

agaaaaaggg atctaggaat gctgaaagat tacccaacat accattatag 2250
 tctcttcttt ctgagaaaat gtgaaaccag aattgcaaga ctgggtggac 2300
 tagaaagggg gattagatca gttttctctt aatatgtcaa ggaaggtagc 2350
 cgggcatggt gccaggcacc tgtaggaaaa tccagcaggt ggaggttgca 2400
 gtgagccgag attatgccat tgcactccag cctgggtgac agagcgggac 2450
 tccgtctc 2458

<210> 503
 <211> 373
 <212> PRT
 <213> Homo Sapien

<400> 503
 Met Ser Leu Leu Leu Leu Leu Leu Leu Val Ser Tyr Tyr Val Gly
 1 5 10 15
 Thr Leu Gly Thr His Thr Glu Ile Lys Arg Val Ala Glu Glu Lys
 20 25 30
 Val Thr Leu Pro Cys His His Gln Leu Gly Leu Pro Glu Lys Asp
 35 40 45
 Thr Leu Asp Ile Glu Trp Leu Leu Thr Asp Asn Glu Gly Asn Gln
 50 55 60
 Lys Val Val Ile Thr Tyr Ser Ser Arg His Val Tyr Asn Asn Leu
 65 70 75
 Thr Glu Glu Gln Lys Gly Arg Val Ala Phe Ala Ser Asn Phe Leu
 80 85 90
 Ala Gly Asp Ala Ser Leu Gln Ile Glu Pro Leu Lys Pro Ser Asp
 95 100 105
 Glu Gly Arg Tyr Thr Cys Lys Val Lys Asn Ser Gly Arg Tyr Val
 110 115 120
 Trp Ser His Val Ile Leu Lys Val Leu Val Arg Pro Ser Lys Pro
 125 130 135
 Lys Cys Glu Leu Glu Gly Glu Leu Thr Glu Gly Ser Asp Leu Thr
 140 145 150
 Leu Gln Cys Glu Ser Ser Ser Gly Thr Glu Pro Ile Val Tyr Tyr
 155 160 165
 Trp Gln Arg Ile Arg Glu Lys Glu Gly Glu Asp Glu Arg Leu Pro
 170 175 180
 Pro Lys Ser Arg Ile Asp Tyr Asn His Pro Gly Arg Val Leu Leu
 185 190 195
 Gln Asn Leu Thr Met Ser Tyr Ser Gly Leu Tyr Gln Cys Thr Ala
 200 205 210
 Gly Asn Glu Ala Gly Lys Glu Ser Cys Val Val Arg Val Thr Val
 215 220 225

Gln	Tyr	Val	Gln	Ser	Ile	Gly	Met	Val	Ala	Gly	Ala	Val	Thr	Gly	
				230					235					240	
Ile	Val	Ala	Gly	Ala	Leu	Leu	Ile	Phe	Leu	Leu	Val	Trp	Leu	Leu	
				245					250					255	
Ile	Arg	Arg	Lys	Asp	Lys	Glu	Arg	Tyr	Glu	Glu	Glu	Glu	Arg	Pro	
				260					265					270	
Asn	Glu	Ile	Arg	Glu	Asp	Ala	Glu	Ala	Pro	Lys	Ala	Arg	Leu	Val	
				275					280					285	
Lys	Pro	Ser	Ser	Ser	Ser	Ser	Gly	Ser	Arg	Ser	Ser	Arg	Ser	Gly	
				290					295					300	
Ser	Ser	Ser	Thr	Arg	Ser	Thr	Ala	Asn	Ser	Ala	Ser	Arg	Ser	Gln	
				305					310					315	
Arg	Thr	Leu	Ser	Thr	Asp	Ala	Ala	Pro	Gln	Pro	Gly	Leu	Ala	Thr	
				320					325					330	
Gln	Ala	Tyr	Ser	Leu	Val	Gly	Pro	Glu	Val	Arg	Gly	Ser	Glu	Pro	
				335					340					345	
Lys	Lys	Val	His	His	Ala	Asn	Leu	Thr	Lys	Ala	Glu	Thr	Thr	Pro	
				350					355					360	
Ser	Met	Ile	Pro	Ser	Gln	Ser	Arg	Ala	Phe	Gln	Thr	Val			
				365					370						

<210> 504
 <211> 3060
 <212> DNA
 <213> Homo Sapien

<400> 504
 cgcgaggcgc ggggagcctg ggaccaggag cgagagccgc ctacctgcag 50
 ccgccgccca cggcacggca gccaccatgg cgctcctgct gtgcttcgtg 100
 ctctgtgctg gagtagtgga tttcgccaga agtttgagta tcactactcc 150
 tgaagagatg attgaaaaag ccaaagggga aactgcctat ctgccatgca 200
 aatttacgct tagtcccga gaccaggac cgctggacat cgagtggctg 250
 atatcaccag ctgataatca gaaggtggat caagtgatta ttttatattc 300
 tggagacaaa atttatgatg actactatcc agatctgaaa ggccgagtac 350
 attttacgag taatgatctc aaatctggtg atgcatcaat aaatgtaacg 400
 aatttacaac tgtcagatat tggcacatat cagtgcaaag tgaaaaaagc 450
 tcctggtgtt gcaaataaga agattcatct ggtagttctt gttaagcctt 500
 caggtgctgag atgttacgtt gatggatctg aagaaattgg aagtgacttt 550
 aagataaaat gtgaaccaa agaaggttca cttccattac agtatgagtg 600
 gcaaaaattg tctgactcac agaaaatgcc cacttcatgg ttagcagaaa 650
 tgacttcac tgttatatct gtaaaaaatg cctcttctga gtactctggg 700

acatacagct gtacagtcag aaacagagtg ggctctgata agtgccctgtt 750
 gcgtctaaac gttgtccctc cttcaaataa agctggacta attgcaggag 800
 ccattatagg aacttttgctt gctctagcgc tcattgggtct tatcatcttt 850
 tgctgtcgta aaaagcgcag agaagaaaaa tatgaaaagg aagttcatca 900
 cgatatcagg gaagatgtgc cacctccaaa gagccgtacg tccactgcca 950
 gaagctacat cggcagtaat cattcatccc tgggggtccat gtctccttcc 1000
 aacatggaag gatattccaa gactcagtat aaccaagtac caagtgaaga 1050
 ctttgaacgc actcctcaga gtccgactct cccacctgct aagttcaagt 1100
 acccttaciaa gactgatgga attacagttg tataaatatg gactactgaa 1150
 gaatctgaag tattgtatta tttgacttta ttttaggcct ctagtaaaga 1200
 cttaaagtgt ttttaaaaaa agcacaaggc acagagatta gagcagctgt 1250
 aagaacacat ctactttatg caatggcatt agacatgtaa gtcagatgtc 1300
 atgtcaaaat tagtacgagc caaattcttt gttaaaaaac cctatgtata 1350
 gtgacactga tagttaaag atgttttatt atattttcaa taactaccac 1400
 taacaaatth ttaacttttc atatgcata tctgatatgt ggtcttttag 1450
 gaaaagtatg gttaatagtt gatttttcaa aggaaattht aaaattctta 1500
 cgttctgttt aatgtttttg ctatttagtt aaatacattg aagggaata 1550
 cccgttcttt tcccttttta tgcacacaac agaaacacgc gttgtcatgc 1600
 ctcaaactat tttttatttg caactacatg atttcacaca attctcttaa 1650
 acaacgacat aaaatagatt tccttgata taaataactt acatacgctc 1700
 cataaagtaa attctcaaag gtgctagaac aaatcgcca cttctacagt 1750
 gttctcgtat ccaacagagt tgatgcacaa tatataaata ctcaagtcca 1800
 atattaaaaa cttaggcact tgactaactt taataaaatt tctcaacta 1850
 tatcaatatc taaagtgcatt atatttttta agaaagatta ttctcaataa 1900
 cttctataaa aataagtttg atggtttggc ccatctaact tcaactactat 1950
 tagtaagaac ttttaacttt taatgtgtag taaggtttat tctacctttt 2000
 tctcaacatg acaccaacac aatcaaaaac gaagttagtg aggtgctaac 2050
 atgtgaggat taatccagtg attccggtca caatgcattc caggaggagg 2100
 taccatgtc actggaattg ggcgatatg tttatttttt cttccctgat 2150
 ttggataacc aatggaaca ggaggaggat agtgattctg atggccattc 2200
 cctcgataca ttcttggtt tttctgggc aaagggtgcc acattggaag 2250
 aggtggaat ataagttctg aaatctgtag ggaagagaac acattaagtt 2300

aattcaaagg aaaaaatcat catctatggt ccagatttct cattaagac 2350
aaagttaccc acaacactga gatcacatct aagtgacact cctattgtca 2400
ggctctaaata cattaataaac ctcatgtgta ataggcgtat aatgtataac 2450
aggtgaccaa tgttttctga atgcataaag aaatgaataa actcaaacac 2500
agtacttcct aaacaacttc aaccaaaaaa gaccaaaaca tggaacgaat 2550
ggaagcttgt aaggacatgc ttgttttagt ccagtgggtt ccacagctgg 2600
ctaagccagg agtcacttgg aggcttttaa atacaaaaca ttggagctgg 2650
aggccattat ccttagcaaa ctaatgcaga aacagaaaat caactaccgc 2700
atgtttctcac ttataagtgg gaggtaatga taagaactta tgaacacaaa 2750
gaaggaaaca atagacattg gagtctatgt gagaggggag ggtgggagaa 2800
ggaaaaggag cagaaaagat aactattgag tactgccttc acacctgggt 2850
gatgaaataa tatgtacaac aaatccctgt gacacatggt tacctatgga 2900
acaaaccttc atgtgtatcc ctaaacctaa aataaaaagt aaaaaaaaaa 2950
aaaraaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3000
aaaaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3050
aaaaaaaaaaaa 3060

<210> 505
<211> 352
<212> PRT
<213> Homo Sapien

<400> 505
Met Ala Leu Leu Leu Cys Phe Val Leu Leu Cys Gly Val Val Asp
1 5 10 15
Phe Ala Arg Ser Leu Ser Ile Thr Thr Pro Glu Glu Met Ile Glu
20 25 30
Lys Ala Lys Gly Glu Thr Ala Tyr Leu Pro Cys Lys Phe Thr Leu
35 40 45
Ser Pro Glu Asp Gln Gly Pro Leu Asp Ile Glu Trp Leu Ile Ser
50 55 60
Pro Ala Asp Asn Gln Lys Val Asp Gln Val Ile Ile Leu Tyr Ser
65 70 75
Gly Asp Lys Ile Tyr Asp Asp Tyr Tyr Pro Asp Leu Lys Gly Arg
80 85 90
Val His Phe Thr Ser Asn Asp Leu Lys Ser Gly Asp Ala Ser Ile
95 100 105
Asn Val Thr Asn Leu Gln Leu Ser Asp Ile Gly Thr Tyr Gln Cys
110 115 120
Lys Val Lys Lys Ala Pro Gly Val Ala Asn Lys Lys Ile His Leu

	125	130	135
Val Val Leu Val	Lys Pro Ser Gly Ala	Arg Cys Tyr Val	Asp Gly
	140	145	150
Ser Glu Glu Ile	Gly Ser Asp Phe Lys	Ile Lys Cys Glu Pro	Lys
	155	160	165
Glu Gly Ser Leu	Pro Leu Gln Tyr Glu	Trp Gln Lys Leu Ser	Asp
	170	175	180
Ser Gln Lys Met	Pro Thr Ser Trp Leu	Ala Glu Met Thr Ser	Ser
	185	190	195
Val Ile Ser Val	Lys Asn Ala Ser Ser	Glu Tyr Ser Gly Thr	Tyr
	200	205	210
Ser Cys Thr Val	Arg Asn Arg Val Gly	Ser Asp Gln Cys Leu	Leu
	215	220	225
Arg Leu Asn Val	Val Pro Pro Ser Asn	Lys Ala Gly Leu Ile	Ala
	230	235	240
Gly Ala Ile Ile	Gly Thr Leu Leu Ala	Leu Ala Leu Ile Gly	Leu
	245	250	255
Ile Ile Phe Cys	Cys Arg Lys Lys Arg	Arg Glu Glu Lys Tyr	Glu
	260	265	270
Lys Glu Val His	His Asp Ile Arg Glu	Asp Val Pro Pro Pro	Lys
	275	280	285
Ser Arg Thr Ser	Thr Ala Arg Ser Tyr	Ile Gly Ser Asn His	Ser
	290	295	300
Ser Leu Gly Ser	Met Ser Pro Ser Asn	Met Glu Gly Tyr Ser	Lys
	305	310	315
Thr Gln Tyr Asn	Gln Val Pro Ser Glu	Asp Phe Glu Arg Thr	Pro
	320	325	330
Gln Ser Pro Thr	Leu Pro Pro Ala Lys	Phe Lys Tyr Pro Tyr	Lys
	335	340	345
Thr Asp Gly Ile	Thr Val Val		
	350		

<210> 506
 <211> 1705
 <212> DNA
 <213> Homo Sapien

<400> 506
 tgaaatgact tccacggctg ggacgggaac cttccaccca cagctatgcc 50
 tctgattggt gaatggtgaa ggtgcctgtc taacttttct gtaaaaagaa 100
 ccagctgcct ccaggcagcc agccctcaag catcacttac aggaccagag 150
 ggacaagaca tgactgtgat gaggagctgc ttctgccaat ttaacaccaa 200
 gaagaattga ggctgcttgg gaggaaggcc aggaggaaca cgagactgag 250

agatgaatTT tcaacagagg ctgcaaagcc tgtggactTT agccagaccc 300
 ttctgccctc ctttctgtggc gacagcctct caaatgcaga tggttgtgct 350
 cccttgccctg ggTTTTTacc tgtttctctg gagccaggta tcagggggccc 400
 agggccaaga attccactTT gggccctgcc aagtgaaggg ggttgttccc 450
 cagaaactgt gggaagcctt ctgggctgtg aaagacacta tgcaagctca 500
 ggataacatc acgagtgcct ggctgtgtga gcaggagggt ctgcagaacg 550
 tctcggtatg tgagagctgt taccttgtcc acaccctgct ggagttctac 600
 ttgaaaactg ttttcaaaaa ccaccacaat agaacagttg aagtcaggac 650
 tctgaagtca ttctctactc tggccaacaa ctttgttctc atcgtgtcac 700
 aactgcaacc cagtcaagaa aatgagatgt tttccatcag agacagtga 750
 cacaggcggg ttctgtctatt ccggagagca ttcaaacagt tggacgtaga 800
 agcagctctg accaaaagccc ttgggggaagt ggacattctt ctgacctgga 850
 tgcagaaatt ctacaagctc tgaatgtcta gaccaggacc tccctcccc 900
 tggcactggg ttgttccctg tgtcatttca aacagtctcc cttcctatgc 950
 tgttcaactg acacttcacg cccttggcca tgggtcccat tcttggccca 1000
 ggattattgt caaagaagtc attctttaag cagcgccagt gacagtcagg 1050
 gaaggtgcct ctggatgctg tgaagagtct acagagaaga ttcttgtatt 1100
 tattacaact ctatttaatt aatgtcagta tttcaactga agttctatTT 1150
 atttgtgaga ctgtaagtta catgaaggca gcagaatatt gtgccccatg 1200
 cttctttacc cctcacaatc cttgccacag tgtggggcag tggatgggtg 1250
 cttagtaagt acttaataaa ctgtgggtgt ttttttggcc tgtctttgga 1300
 ttgttaaaaa acagagaggg atgcttggat gtaaaactga acttcagagc 1350
 atgaaaatca cactgtcttc tgatatctgc agggacagag cattgggggtg 1400
 ggggtaaggt gcatctgttt gaaaagtaaa cgataaaatg tggattaaag 1450
 tgcccagcac aaagcagatc ctcaataaac atttcatttc cccccacac 1500
 tcgccagctc accccatcat ccctttccct tggtgccctc cttttttttt 1550
 tctcctagtc attcttccct aatcttcac ttgagtgtca agctgacctt 1600
 gctgatgggt acattgcacc tggatgtact atccaatctg tgatgacatt 1650
 ccctgctaatt aaaagacaac ataactcaa aaaaaaaaaa aaaaaaaaaa 1700
 aaaaa 1705

<210> 507
 <211> 206
 <212> PRT

<213> Homo Sapien

<400> 507

Met	Asn	Phe	Gln	Gln	Arg	Leu	Gln	Ser	Leu	Trp	Thr	Leu	Ala	Arg	
1				5					10					15	
Pro	Phe	Cys	Pro	Pro	Leu	Leu	Ala	Thr	Ala	Ser	Gln	Met	Gln	Met	
			20						25					30	
Val	Val	Leu	Pro	Cys	Leu	Gly	Phe	Thr	Leu	Leu	Leu	Trp	Ser	Gln	
				35					40					45	
Val	Ser	Gly	Ala	Gln	Gly	Gln	Glu	Phe	His	Phe	Gly	Pro	Cys	Gln	
				50					55					60	
Val	Lys	Gly	Val	Val	Pro	Gln	Lys	Leu	Trp	Glu	Ala	Phe	Trp	Ala	
				65					70					75	
Val	Lys	Asp	Thr	Met	Gln	Ala	Gln	Asp	Asn	Ile	Thr	Ser	Ala	Arg	
				80					85					90	
Leu	Leu	Gln	Gln	Glu	Val	Leu	Gln	Asn	Val	Ser	Asp	Ala	Glu	Ser	
				95					100					105	
Cys	Tyr	Leu	Val	His	Thr	Leu	Leu	Glu	Phe	Tyr	Leu	Lys	Thr	Val	
				110					115					120	
Phe	Lys	Asn	His	His	Asn	Arg	Thr	Val	Glu	Val	Arg	Thr	Leu	Lys	
				125					130					135	
Ser	Phe	Ser	Thr	Leu	Ala	Asn	Asn	Phe	Val	Leu	Ile	Val	Ser	Gln	
				140					145					150	
Leu	Gln	Pro	Ser	Gln	Glu	Asn	Glu	Met	Phe	Ser	Ile	Arg	Asp	Ser	
				155					160					165	
Ala	His	Arg	Arg	Phe	Leu	Leu	Phe	Arg	Arg	Ala	Phe	Lys	Gln	Leu	
				170					175					180	
Asp	Val	Glu	Ala	Ala	Leu	Thr	Lys	Ala	Leu	Gly	Glu	Val	Asp	Ile	
				185					190					195	
Leu	Leu	Thr	Trp	Met	Gln	Lys	Phe	Tyr	Lys	Leu					
				200					205						

<210> 508

<211> 924

<212> DNA

<213> Homo Sapien

<400> 508

aaggagcagc ccgcaagcac caagtgagag gcatgaagtt acagtgtggt 50
tccctttggc tcttggttac aatactgata ttgtgctcag tagacaacca 100
cgggtctcagg agatgtctga tttccacaga catgcaccat atagaagaga 150
gtttccaaga aatcaaaaga gccatccaag ctaaggacac cttcccaa 200
gtcactatcc tgtccacatt ggagactctg cagatcatta agcccttaga 250
tgtgtgctgc gtgaccaaga acctcctggc gttctacgtg gacaggggtg 300

tcaaggatca tcaggagcca aacccccaaaa tottgagaaa aatcagcagc 350
attgccaaact ctttcctcta catgcagaaa actctgcggc aatgtcagga 400
acagaggcag tgtcactgca ggcaggaagc caccaatgcc accagagtca 450
tccatgacaa ctatgatcag ctggaggtcc acgctgctgc cattaatatcc 500
ctgggagagc tcgacgtctt tctagcctgg attaataaga atcatgaagt 550
aatgtttctca gcttgatgac aaggaacctg tatagtgatc cagggatgaa 600
cacccccctgt gcggtttact gtgggagaca gccacacctg aaggggaagg 650
agatggggaa ggccccttgc agctgaaagt cccactggct ggcctcaggc 700
tgtcttattc cgcttgaaaa taggcaaaaa gtctactgtg gtatttgtaa 750
taaactctat ctgctgaaag ggcctgcagg ccatcctggg agtaaagggc 800
tgccttccca tctaatttat tgtaaagtca tatagtccat gtctgtgatg 850
tgagccaagt gatatcctgt agtacacatt gtaactgagt gtttttctga 900
ataaattcca tattttacct atga 924

<210> 509

<211> 177

<212> PRT

<213> Homo Sapien

<400> 509

Met	Lys	Leu	Gln	Cys	Val	Ser	Leu	Trp	Leu	Leu	Gly	Thr	Ile	Leu	1	5	10	15
Ile	Leu	Cys	Ser	Val	Asp	Asn	His	Gly	Leu	Arg	Arg	Cys	Leu	Ile	20	25	30	
Ser	Thr	Asp	Met	His	His	Ile	Glu	Glu	Ser	Phe	Gln	Glu	Ile	Lys	35	40	45	
Arg	Ala	Ile	Gln	Ala	Lys	Asp	Thr	Phe	Pro	Asn	Val	Thr	Ile	Leu	50	55	60	
Ser	Thr	Leu	Glu	Thr	Leu	Gln	Ile	Ile	Lys	Pro	Leu	Asp	Val	Cys	65	70	75	
Cys	Val	Thr	Lys	Asn	Leu	Leu	Ala	Phe	Tyr	Val	Asp	Arg	Val	Phe	80	85	90	
Lys	Asp	His	Gln	Glu	Pro	Asn	Pro	Lys	Ile	Leu	Arg	Lys	Ile	Ser	95	100	105	
Ser	Ile	Ala	Asn	Ser	Phe	Leu	Tyr	Met	Gln	Lys	Thr	Leu	Arg	Gln	110	115	120	
Cys	Gln	Glu	Gln	Arg	Gln	Cys	His	Cys	Arg	Gln	Glu	Ala	Thr	Asn	125	130	135	
Ala	Thr	Arg	Val	Ile	His	Asp	Asn	Tyr	Asp	Gln	Leu	Glu	Val	His	140	145	150	
Ala	Ala	Ala	Ile	Lys	Ser	Leu	Gly	Glu	Leu	Asp	Val	Phe	Leu	Ala				

	155	160	165
Trp Ile Asn Lys Asn His Glu Val Met Phe Ser Ala			
	170	175	

<210> 510
 <211> 996
 <212> DNA
 <213> Homo Sapien

<400> 510
 cccgtgccaa gagtgacgta agtaccgcct atagagtcta taggcccact 50
 tggttcggtt agaacgcggc tacaattaat acataacctt atgtatcata 100
 cacatacgat ttaggtgaca ctatagaata acatccactt tgcctttctc 150
 tccacaggtg tccactccca ggtccaactg cacctcggtt ctatcgataa 200
 totcagcacc agccactcag agcagggcac gatgttgggg gcccgccca 250
 ggctctgggt ctgtgccttg tgcagcgtct gcagcatgag cgtccctcaga 300
 gcctatccca atgcctcccc actgctcggc tccagctggg gtggcctgat 350
 ccacctgtac acagccacag ccaggaacag ctaccacctg cagatccaca 400
 agaatggcca tgtggatggc gcaccccatc agaccatcta cagtgccctg 450
 atgatcagat cagaggatgc tggctttgtg gtgattacag gtgtgatgag 500
 cagaagatac ctctgcatgg atttcagagg caacattttt ggatcacact 550
 atttcgaccc ggagaactgc aggttccaac accagacgct ggaaaacggg 600
 tacgacgtct accactctcc tcagtatcac ttcttggtca gtctgggccc 650
 ggccaagaga gccttccctgc caggcatgaa cccacccccg tactcccagt 700
 tcctgtcccc gaggaacgag atccccctaa ttcacttcaa ccccccata 750
 ccacggcggc acacccggag cgcgaggac gactcggagc gggaccccct 800
 gaacgtgctg aagccccggg cccgatgac cccggccccg gcctcctgtt 850
 cacaggagct cccgagcgcc gaggacaaca gccgatggc cagtgaccca 900
 ttaggggtg tcaggggccc tcagagtgaac acgcacgctg ggggaacggg 950
 cccggaaggc tgccgcccct tcgccaagtt catctagggt cgctgg 996

<210> 511
 <211> 251
 <212> PRT
 <213> Homo Sapien

<400> 511
 Met Leu Gly Ala Arg Leu Arg Leu Trp Val Cys Ala Leu Cys Ser
 1 5 10 15
 Val Cys Ser Met Ser Val Leu Arg Ala Tyr Pro Asn Ala Ser Pro
 20 25 30

Leu	Leu	Gly	Ser	Ser	Trp	Gly	Gly	Leu	Ile	His	Leu	Tyr	Thr	Ala	
				35					40					45	
Thr	Ala	Arg	Asn	Ser	Tyr	His	Leu	Gln	Ile	His	Lys	Asn	Gly	His	
				50					55					60	
Val	Asp	Gly	Ala	Pro	His	Gln	Thr	Ile	Tyr	Ser	Ala	Leu	Met	Ile	
				65					70					75	
Arg	Ser	Glu	Asp	Ala	Gly	Phe	Val	Val	Ile	Thr	Gly	Val	Met	Ser	
				80					85					90	
Arg	Arg	Tyr	Leu	Cys	Met	Asp	Phe	Arg	Gly	Asn	Ile	Phe	Gly	Ser	
				95					100					105	
His	Tyr	Phe	Asp	Pro	Glu	Asn	Cys	Arg	Phe	Gln	His	Gln	Thr	Leu	
				110					115					120	
Glu	Asn	Gly	Tyr	Asp	Val	Tyr	His	Ser	Pro	Gln	Tyr	His	Phe	Leu	
				125					130					135	
Val	Ser	Leu	Gly	Arg	Ala	Lys	Arg	Ala	Phe	Leu	Pro	Gly	Met	Asn	
				140					145					150	
Pro	Pro	Pro	Tyr	Ser	Gln	Phe	Leu	Ser	Arg	Arg	Asn	Glu	Ile	Pro	
				155					160					165	
Leu	Ile	His	Phe	Asn	Thr	Pro	Ile	Pro	Arg	Arg	His	Thr	Arg	Ser	
				170					175					180	
Ala	Glu	Asp	Asp	Ser	Glu	Arg	Asp	Pro	Leu	Asn	Val	Leu	Lys	Pro	
				185					190					195	
Arg	Ala	Arg	Met	Thr	Pro	Ala	Pro	Ala	Ser	Cys	Ser	Gln	Glu	Leu	
				200					205					210	
Pro	Ser	Ala	Glu	Asp	Asn	Ser	Pro	Met	Ala	Ser	Asp	Pro	Leu	Gly	
				215					220					225	
Val	Val	Arg	Gly	Gly	Arg	Val	Asn	Thr	His	Ala	Gly	Gly	Thr	Gly	
				230					235					240	
Pro	Glu	Gly	Cys	Arg	Pro	Phe	Ala	Lys	Phe	Ile					
				245					250						

<210> 512
 <211> 2015
 <212> DNA
 <213> Homo Sapien

<400> 512
 ggaaaaggta cccgcgagag acagccagca gttotgtgga gcagcgggtgg 50
 ccggctagga tgggctgtct ctgggggtctg gctctgcccc ttttcttctt 100
 ctgctgggag gttgggggtct ctgggagctc tgcaggcccc agcacccgca 150
 gagcagacac tgcatgaca acggacgaca cagaagtgcc cgctatgact 200
 ctagcaccgg gccacgcccgc totggaaact caaacgctga gcgctgagac 250
 ctcttctagg gcctcaaccc cagccggccc cattccagaa gcagagacca 300

ggggagccaa gagaatttcc cctgcaagag agaccaggag tttcacaaaa 350
 acatctccca acttcatggt gctgatcgcc acctcogtgg agacatcagc 400
 cgccagtggc agccccgagg gagctggaat gaccacagtt cagaccatca 450
 caggcagtga tcccagaggaa gccatctttg acaccctttg caccgatgac 500
 agctctgaag aggcaaagac actcacaatg gacatattga cattgggtca 550
 cacctccaca gaagctaagg gcctgtcctc agagagcagt gcctcttccg 600
 acggccccca tccagtcac accccgtcac gggcctcaga gagcagcgcc 650
 tcttccgacg gcccccatcc agtcacaccc ccgtcacggg cctcagagag 700
 cagcgctctc tccgacggcc cccatccagt catcaaccog tcatgggtccc 750
 cgggatctga tgtcactctc ctgctgaag ccctgggtgac tgtcacaaac 800
 atcgaggtta ttaattgcag catcacagaa atagaaacaa caacttccag 850
 catccctggg gcctcagaca tagatctcat cccacggaa ggggtgaagg 900
 cctcgccac ctccgatcca ccagctctgc ctgactccac tgaagcaaaa 950
 ccacacatca ctgaggtcac agcctctgcc gagaccctgt ccacagccgg 1000
 caccacagag tcagctgcac ctcatgccac ggttgggacc ccactcccca 1050
 ctaacagcgc cacagaaaga gaagtgcag caccoggggc cagaccctc 1100
 agtgagctc tggtcacagt tagcaggaat cccctggaag aaacctcagc 1150
 cctctctgtt gagacaccaa gttacgtcaa agtctcagga gcagctccgg 1200
 tctccataga ggctgggtca gcagtgggca aaacaacttc ctttgctggg 1250
 agctctgctt cctcctacag cccctcgga ggcgcctca agaacttcac 1300
 cccttcagag acaccgacca tggacatgc aaccaagggg cccttcccca 1350
 ccagcagga ccctcttctc tctgtccctc cgactacaac caacagcagc 1400
 cgagggacga acagcacctt agccaagatc acaacctcag cgaagaccac 1450
 gatgaagccc caacagccac gccacgact gcccgacga ggccgaccac 1500
 agacgtgagt gcaggtgaaa atggaggttt cctcctcctg cggctgagt 1550
 tggcttcccc ggaagacctc actgacccca gagtggcaga aaggctgatg 1600
 cagcagctcc accgggaact ccacgcccac gcgcctcact tccaggtctc 1650
 cttactgctg gtcaggagag gctaacggac atcagctgca gccaggcatg 1700
 tcccgatgac caaaagaggg tgctgcccct agcctgggac cccaccgaca 1750
 gactgcagct gcgttactgt gctgagaggt acccagaagg tttccatgaa 1800
 gggcagcatg tccaagcccc taaccccaga tgtggcaaca ggaccctgc 1850
 tcacatccac cggagtgtat gtatggggag gggcttcacc tgttcccaga 1900

gggtgtccttg gactcacctt ggcacatggt ctgtgtttca gtaaagagag 1950
acctgatcac ccatctgtgt gcttccatcc tgcattaaaa ttactcagt 2000
gtggcccaaa aaaaa 2015

<210> 513
<211> 482
<212> PRT
<213> Homo Sapien

<400> 513
Met Gly Cys Leu Trp Gly Leu Ala Leu Pro Leu Phe Phe Phe Cys
1 5 10 15
Trp Glu Val Gly Val Ser Gly Ser Ser Ala Gly Pro Ser Thr Arg
20 25 30
Arg Ala Asp Thr Ala Met Thr Thr Asp Asp Thr Glu Val Pro Ala
35 40 45
Met Thr Leu Ala Pro Gly His Ala Ala Leu Glu Thr Gln Thr Leu
50 55 60
Ser Ala Glu Thr Ser Ser Arg Ala Ser Thr Pro Ala Gly Pro Ile
65 70 75
Pro Glu Ala Glu Thr Arg Gly Ala Lys Arg Ile Ser Pro Ala Arg
80 85 90
Glu Thr Arg Ser Phe Thr Lys Thr Ser Pro Asn Phe Met Val Leu
95 100 105
Ile Ala Thr Ser Val Glu Thr Ser Ala Ala Ser Gly Ser Pro Glu
110 115 120
Gly Ala Gly Met Thr Thr Val Gln Thr Ile Thr Gly Ser Asp Pro
125 130 135
Glu Glu Ala Ile Phe Asp Thr Leu Cys Thr Asp Asp Ser Ser Glu
140 145 150
Glu Ala Lys Thr Leu Thr Met Asp Ile Leu Thr Leu Ala His Thr
155 160 165
Ser Thr Glu Ala Lys Gly Leu Ser Ser Glu Ser Ser Ala Ser Ser
170 175 180
Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg Ala Ser Glu Ser
185 190 195
Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg
200 205 210
Ala Ser Glu Ser Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile
215 220 225
Thr Pro Ser Trp Ser Pro Gly Ser Asp Val Thr Leu Leu Ala Glu
230 235 240
Ala Leu Val Thr Val Thr Asn Ile Glu Val Ile Asn Cys Ser Ile
245 250 255

Thr	Glu	Ile	Glu	Thr	Thr	Thr	Ser	Ser	Ile	Pro	Gly	Ala	Ser	Asp	260	265	270
Ile	Asp	Leu	Ile	Pro	Thr	Glu	Gly	Val	Lys	Ala	Ser	Ser	Thr	Ser	275	280	285
Asp	Pro	Pro	Ala	Leu	Pro	Asp	Ser	Thr	Glu	Ala	Lys	Pro	His	Ile	290	295	300
Thr	Glu	Val	Thr	Ala	Ser	Ala	Glu	Thr	Leu	Ser	Thr	Ala	Gly	Thr	305	310	315
Thr	Glu	Ser	Ala	Ala	Pro	His	Ala	Thr	Val	Gly	Thr	Pro	Leu	Pro	320	325	330
Thr	Asn	Ser	Ala	Thr	Glu	Arg	Glu	Val	Thr	Ala	Pro	Gly	Ala	Thr	335	340	345
Thr	Leu	Ser	Gly	Ala	Leu	Val	Thr	Val	Ser	Arg	Asn	Pro	Leu	Glu	350	355	360
Glu	Thr	Ser	Ala	Leu	Ser	Val	Glu	Thr	Pro	Ser	Tyr	Val	Lys	Val	365	370	375
Ser	Gly	Ala	Ala	Pro	Val	Ser	Ile	Glu	Ala	Gly	Ser	Ala	Val	Gly	380	385	390
Lys	Thr	Thr	Ser	Phe	Ala	Gly	Ser	Ser	Ala	Ser	Ser	Tyr	Ser	Pro	395	400	405
Ser	Glu	Ala	Ala	Leu	Lys	Asn	Phe	Thr	Pro	Ser	Glu	Thr	Pro	Thr	410	415	420
Met	Asp	Ile	Ala	Thr	Lys	Gly	Pro	Phe	Pro	Thr	Ser	Arg	Asp	Pro	425	430	435
Leu	Pro	Ser	Val	Pro	Pro	Thr	Thr	Thr	Asn	Ser	Ser	Arg	Gly	Thr	440	445	450
Asn	Ser	Thr	Leu	Ala	Lys	Ile	Thr	Thr	Ser	Ala	Lys	Thr	Thr	Met	455	460	465
Lys	Pro	Gln	Gln	Pro	Arg	Pro	Arg	Leu	Pro	Gly	Arg	Gly	Arg	Pro	470	475	480

Gln Thr

<210> 514
 <211> 2284
 <212> DNA
 <213> Homo Sapien

<400> 514
 gcggagcatc cgctgcggtc ctgcgcgaga ccccgcgcg gattcgccgg 50
 tccttcccg cggcgcgaca gagctgtcct cgcacctgga tggcagcagg 100
 ggcgcggggg tcctctcgac gccagagaga aatctcatca tctgtgcagc 150
 cttcttaaag caaactaaga ccagagggag gattatcctt gacctttgaa 200
 gacccaaaact aaactgaaat ttaaaatgtt cttcggggga gaaggagct 250

tgacttacac tttggtaata atttgcttcc tgacactaag gctgtctgct 300
 agtcagaatt gcctcaaaaa gagtctagaa gatgttgtca ttgacatcca 350
 gtcattctctt tctaagggaa tcagaggcaa tgagcccgta tatacttcaa 400
 ctcaagaaga ctgcattaat tcttgctggt caacaaaaaa catatcaggg 450
 gacaaagcat gtaacttgat gatcttcgac actcgaaaaa cagctagaca 500
 acccaactgc tacctatttt tctgtcccaa cgaggaagcc tgtccattga 550
 aaccagcaaa aggacttatg agttacagga taattacaga ttttccatct 600
 ttgaccagaa atttgccaa ccaagagtta cccaggaag attctctctt 650
 acatggccaa ttttcacaag cagtcactcc cctagcccat catcacacag 700
 attattcaaa gccaccgat atctcatgga gagacacact ttctcagaag 750
 tttggatcct cagatcacct ggagaaacta ttttaagatgg atgaagcaag 800
 tgcccagctc cttgcttata aggaaaaagg ccattctcag agttcacaat 850
 tttcctctga tcaagaaata gctcatctgc tgcttgaaaa tgtgagtgcg 900
 ctcccagcta cgggtggcagt tgcttctcca cataccacct cggctactcc 950
 aaagcccgcc acccttctac ccaccaatgc ttcagtgaca ccttctggga 1000
 cttcccagcc acagctggcc accacagctc cacctgtaac cactgtcact 1050
 tctcagctc ccacgacct catttctaca gtttttacac gggctgcggc 1100
 tacactccaa gcaatggcta caacagcagt tctgactacc acctttcagg 1150
 cacctacgga ctcgaaaggc agcttagaaa ccataccgtt tacagaaatc 1200
 tccaacttaa ctttgaacac agggaatgtg tataacccta ctgcactttc 1250
 tatgtcaaat gtggagtctt ccactatgaa taaaactgct tctgggaag 1300
 gtagggaggc cagtccaggc agttcctccc agggcagtggt tccagaaaat 1350
 cagtacggcc ttccatttga aaaatggctt cttatcgggt ccctgctctt 1400
 tgggtgtctg ttcttggtga taggcctcgt cctcctgggt agaatccttt 1450
 cggaatcact ccgcaggaaa cgttactcaa gactggatta tttgatcaat 1500
 gggatctatg tggacatcta aggatggaac togggtgtctc ttaattcatt 1550
 tagtaaccag aagcccaaat gcaatgagtt tctgctgact tgctagtctt 1600
 agcaggaggt tgtattttga agacaggaaa atgccccctt ctgctttcct 1650
 tttttttttt ggagacagag tcttgctctg ttgccaggc tggagtgcag 1700
 tagcacgac tcggctctca ccgcaacctc cgtctcctgg gttcaagcga 1750
 ttctcctgcc tcagctcct aagtatctgg gattacaggc atgtgccacc 1800
 acacctgggt gatTTTTTgta ttttttagtag agacgggggt tcaccatggt 1850

ggtcaggctg gtctcaaact cctgacctag tgatccaccc tctcggcct 1900
 cccaaagtgc tgggattaca ggcattgagcc accacagctg gcccccttct 1950
 gttttatgtt tggtttttga gaaggaatga agtggggaacc aaattaggta 2000
 attttgggta atctgtctct aaaatattag ctaaaaacaa agctctatgt 2050
 aaagtaataa agtataattg ccatataaat ttcaaaattc aactggcctt 2100
 tatgcaaaga aacagggttag gacatctagg ttccaattca ttcacattct 2150
 tggttccaga taaaatcaac tggtttatct aatttctaata ggatttgctt 2200
 ttctttttat atggattcct ttaaaactta ttccagatgt agttccttcc 2250
 aattaaaatat ttgaataaat cttttgttac tcaa 2284

<210> 515

<211> 431

<212> PRT

<213> Homo Sapien

<400> 515

Met	Phe	Phe	Gly	Gly	Glu	Gly	Ser	Leu	Thr	Tyr	Thr	Leu	Val	Ile
1				5					10					15
Ile	Cys	Phe	Leu	Thr	Leu	Arg	Leu	Ser	Ala	Ser	Gln	Asn	Cys	Leu
				20					25					30
Lys	Lys	Ser	Leu	Glu	Asp	Val	Val	Ile	Asp	Ile	Gln	Ser	Ser	Leu
				35					40					45
Ser	Lys	Gly	Ile	Arg	Gly	Asn	Glu	Pro	Val	Tyr	Thr	Ser	Thr	Gln
				50					55					60
Glu	Asp	Cys	Ile	Asn	Ser	Cys	Cys	Ser	Thr	Lys	Asn	Ile	Ser	Gly
				65					70					75
Asp	Lys	Ala	Cys	Asn	Leu	Met	Ile	Phe	Asp	Thr	Arg	Lys	Thr	Ala
				80					85					90
Arg	Gln	Pro	Asn	Cys	Tyr	Leu	Phe	Phe	Cys	Pro	Asn	Glu	Glu	Ala
				95					100					105
Cys	Pro	Leu	Lys	Pro	Ala	Lys	Gly	Leu	Met	Ser	Tyr	Arg	Ile	Ile
				110					115					120
Thr	Asp	Phe	Pro	Ser	Leu	Thr	Arg	Asn	Leu	Pro	Ser	Gln	Glu	Leu
				125					130					135
Pro	Gln	Glu	Asp	Ser	Leu	Leu	His	Gly	Gln	Phe	Ser	Gln	Ala	Val
				140					145					150
Thr	Pro	Leu	Ala	His	His	His	Thr	Asp	Tyr	Ser	Lys	Pro	Thr	Asp
				155					160					165
Ile	Ser	Trp	Arg	Asp	Thr	Leu	Ser	Gln	Lys	Phe	Gly	Ser	Ser	Asp
				170					175					180
His	Leu	Glu	Lys	Leu	Phe	Lys	Met	Asp	Glu	Ala	Ser	Ala	Gln	Leu
				185					190					195

Leu	Ala	Tyr	Lys	Glu	Lys	Gly	His	Ser	Gln	Ser	Ser	Gln	Phe	Ser	
				200					205					210	
Ser	Asp	Gln	Glu	Ile	Ala	His	Leu	Leu	Pro	Glu	Asn	Val	Ser	Ala	
				215					220					225	
Leu	Pro	Ala	Thr	Val	Ala	Val	Ala	Ser	Pro	His	Thr	Thr	Ser	Ala	
				230					235					240	
Thr	Pro	Lys	Pro	Ala	Thr	Leu	Leu	Pro	Thr	Asn	Ala	Ser	Val	Thr	
				245					250					255	
Pro	Ser	Gly	Thr	Ser	Gln	Pro	Gln	Leu	Ala	Thr	Thr	Ala	Pro	Pro	
				260					265					270	
Val	Thr	Thr	Val	Thr	Ser	Gln	Pro	Pro	Thr	Thr	Leu	Ile	Ser	Thr	
				275					280					285	
Val	Phe	Thr	Arg	Ala	Ala	Ala	Thr	Leu	Gln	Ala	Met	Ala	Thr	Thr	
				290					295					300	
Ala	Val	Leu	Thr	Thr	Thr	Phe	Gln	Ala	Pro	Thr	Asp	Ser	Lys	Gly	
				305					310					315	
Ser	Leu	Glu	Thr	Ile	Pro	Phe	Thr	Glu	Ile	Ser	Asn	Leu	Thr	Leu	
				320					325					330	
Asn	Thr	Gly	Asn	Val	Tyr	Asn	Pro	Thr	Ala	Leu	Ser	Met	Ser	Asn	
				335					340					345	
Val	Glu	Ser	Ser	Thr	Met	Asn	Lys	Thr	Ala	Ser	Trp	Glu	Gly	Arg	
				350					355					360	
Glu	Ala	Ser	Pro	Gly	Ser	Ser	Ser	Gln	Gly	Ser	Val	Pro	Glu	Asn	
				365					370					375	
Gln	Tyr	Gly	Leu	Pro	Phe	Glu	Lys	Trp	Leu	Leu	Ile	Gly	Ser	Leu	
				380					385					390	
Leu	Phe	Gly	Val	Leu	Phe	Leu	Val	Ile	Gly	Leu	Val	Leu	Leu	Gly	
				395					400					405	
Arg	Ile	Leu	Ser	Glu	Ser	Leu	Arg	Arg	Lys	Arg	Tyr	Ser	Arg	Leu	
				410					415					420	
Asp	Tyr	Leu	Ile	Asn	Gly	Ile	Tyr	Val	Asp	Ile					
				425					430						

<210> 516
 <211> 2749
 <212> DNA
 <213> Homo Sapien

<220>
 <221> unsure
 <222> 1869, 1887
 <223> unknown base

<400> 516
 ctcccacggt gtccagcgcc cagaatgcgg cttctgggtcc tgctatgggg 50
 ttgcctgctg ctcccaggtt atgaagccct ggagggccca gaggaaatca 100

gcggggttcga aggggacact gtgtccctgc agtgcaccta caggggaagag 150
 ctgaggggacc accggaagta ctggtgcagg aaggggtggga tcctctttctc 200
 tcgctgctctt ggcaccatct atgcagaaga agaaggccag gagacaatga 250
 agggcaggggt gtccatccgt gacagccgcc aggagctctc gtcattgtg 300
 accctgtgga acctcacctt gcaagacgct ggggagtact ggtgtgggggt 350
 cgaaaaacgg ggccccgatg agtctttact gatctctctg ttctgttttc 400
 caggaccctg ctgtcctccc tcccctttctc ccaccttcca gcctctggct 450
 acaacacgcc tgcagcccaa ggcaaaagct cagcaaacc agccccaggg 500
 attgacttct cctgggctct acccggcagc caccacagcc aagcagggga 550
 agacaggggc tgaggccctt ccattgccag ggacttccca gtacgggcac 600
 gaaaggactt ctgagtacac aggaacctct cctcaccag cgacctctcc 650
 tcctgcaggg agctcccgcc ccccatgca gctggactcc acctcagcag 700
 aggacaccag tccagctctc agcagtggca gctctaagcc caggggtgtcc 750
 atcccgatgg tccgcatact ggccccagtc ctggtgctgc tgagccttct 800
 gtcagccgca ggctgatcg ccttctgcag ccacctgctc ctgtggagaa 850
 aggaagctca acaggccacg gagacacaga ggaacgagaa gttctggctc 900
 tcacgcttga ctgcgaggga aaaggaagcc ccttcccagg cccctgaggg 950
 ggacgtgatc tcgatgcctc ccctccacac atctgaggag gagctgggct 1000
 tctcgaagtt tgtctcagcg tagggcagga ggccctcctg gccaggccag 1050
 cagtgaagca gtatggctgg ctggatcagc accgattccc gaaagctttc 1100
 cacctcagcc tcagagtcca gctgcccga ctccagggct ctccccaccc 1150
 tccccagget ctctcttgc atgttccagc ctgacctaga agcgtttgtc 1200
 agccctggag cccagagcgg tggccttgct cttccggctg gagactggga 1250
 catccctgat aggttcacat ccctgggcag agtaccaggc tgctgaccct 1300
 cagcagggcc agacaaggct cagtggatct ggtctgagtt tcaatctgcc 1350
 aggaactcct gggcctcatg ccagtgctg gaccctgcct tcctccact 1400
 ccagacccca ccttgtcttc cctccctggc gtctcagac ttagtcccac 1450
 ggtctcctgc atcagctggg gatgaagagg agcatgctgg ggtgagactg 1500
 ggattctggc ttctctttga accacctgca tccagccctt caggaagcct 1550
 gtgaaaaacg tgattcctgg cccaccaag acccaccaaa accatctctg 1600
 ggcttggtgc aggactctga attctaaca tgcccagtga ctgtcgcaact 1650
 tgagtttgag ggccagtggt cctgatgaac gctcacacc cttcagctta 1700

gagtctgcat ttgggctgtg acgtctccac ctgcccacat agatctgctc 1750
 tgtctgcgac accagatcca cgtggggact cccctgaggc ctgctaagtc 1800
 caggccttgg tcaggtcagg tgcacattgc aggataagcc caggaccggc 1850
 acagaagtgg ttgcctttnc catttgcctt ccctgggncca tgccttcttg 1900
 cctttggaaa aaatgatgaa gaaaaccttg gctccttcct tgtctggaaa 1950
 gggttacttg cctatgggtt ctggtggcta gagagaaaag tagaaaacca 2000
 gagtgcacgt aggtgtotaa cacagaggag agtaggaaca gggcggatac 2050
 ctgaagggtga ctccgagtc agccccctgg agaaggggtc gggggtggtg 2100
 gtaaagtagc acaactacta ttttttttct ttttccatta ttattgtttt 2150
 ttaagacaga atctcgtgct gctgcccagg ctggagtga gtggcacgat 2200
 ctgcaaactc cgcctcctgg gttcaagtga ttcttctgcc tcagcctccc 2250
 gagttagctgg gattacaggc acgcaccacc acacctggtt aatttttgta 2300
 ctttttagtag agatgggggtt tcaccatgtt ggccaggctg gtottgaact 2350
 cctgacctca aatgagcctc ctgcttcagt ctcccaaatt gccgggatta 2400
 caggcatgag ccactgtgtc tggccctatt tccttttaaaa agtgaaatta 2450
 agagttgttc agtatgcaaa acttggaag atggaggaga aaaagaaaag 2500
 gaagaaaaaa atgtcaccca tagtctcacc agagactatc attatttcgt 2550
 tttgttgtag ttccttcac tcttttcttc ttcacataat ttgccggtgt 2600
 tctttttaca gagcaattat cttgtatata caactttgta tcctgccttt 2650
 tccaccttat cgttccatca ctttattcca gcacttctct gtgttttaca 2700
 gaccttttta taaataaaat gttcatcagc tgcataaaaa aaaaaaaaaa 2749

<210> 517

<211> 332

<212> PRT

<213> Homo Sapien

<400> 517

Met	Arg	Leu	Leu	Val	Leu	Leu	Trp	Gly	Cys	Leu	Leu	Leu	Pro	Gly
1				5					10					15
Tyr	Glu	Ala	Leu	Glu	Gly	Pro	Glu	Glu	Ile	Ser	Gly	Phe	Glu	Gly
				20					25					30
Asp	Thr	Val	Ser	Leu	Gln	Cys	Thr	Tyr	Arg	Glu	Glu	Leu	Arg	Asp
				35					40					45
His	Arg	Lys	Tyr	Trp	Cys	Arg	Lys	Gly	Gly	Ile	Leu	Phe	Ser	Arg
				50					55					60
Cys	Ser	Gly	Thr	Ile	Tyr	Ala	Glu	Glu	Glu	Gly	Gln	Glu	Thr	Met
				65					70					75

Lys	Gly	Arg	Val	Ser	Ile	Arg	Asp	Ser	Arg	Gln	Glu	Leu	Ser	Leu	
				80					85					90	
Ile	Val	Thr	Leu	Trp	Asn	Leu	Thr	Leu	Gln	Asp	Ala	Gly	Glu	Tyr	
				95					100					105	
Trp	Cys	Gly	Val	Glu	Lys	Arg	Gly	Pro	Asp	Glu	Ser	Leu	Leu	Ile	
				110					115					120	
Ser	Leu	Phe	Val	Phe	Pro	Gly	Pro	Cys	Cys	Pro	Pro	Ser	Pro	Ser	
				125					130					135	
Pro	Thr	Phe	Gln	Pro	Leu	Ala	Thr	Thr	Arg	Leu	Gln	Pro	Lys	Ala	
				140					145					150	
Lys	Ala	Gln	Gln	Thr	Gln	Pro	Pro	Gly	Leu	Thr	Ser	Pro	Gly	Leu	
				155					160					165	
Tyr	Pro	Ala	Ala	Thr	Thr	Ala	Lys	Gln	Gly	Lys	Thr	Gly	Ala	Glu	
				170					175					180	
Ala	Pro	Pro	Leu	Pro	Gly	Thr	Ser	Gln	Tyr	Gly	His	Glu	Arg	Thr	
				185					190					195	
Ser	Gln	Tyr	Thr	Gly	Thr	Ser	Pro	His	Pro	Ala	Thr	Ser	Pro	Pro	
				200					205					210	
Ala	Gly	Ser	Ser	Arg	Pro	Pro	Met	Gln	Leu	Asp	Ser	Thr	Ser	Ala	
				215					220					225	
Glu	Asp	Thr	Ser	Pro	Ala	Leu	Ser	Ser	Gly	Ser	Ser	Lys	Pro	Arg	
				230					235					240	
Val	Ser	Ile	Pro	Met	Val	Arg	Ile	Leu	Ala	Pro	Val	Leu	Val	Leu	
				245					250					255	
Leu	Ser	Leu	Leu	Ser	Ala	Ala	Gly	Leu	Ile	Ala	Phe	Cys	Ser	His	
				260					265					270	
Leu	Leu	Leu	Trp	Arg	Lys	Glu	Ala	Gln	Gln	Ala	Thr	Glu	Thr	Gln	
				275					280					285	
Arg	Asn	Glu	Lys	Phe	Trp	Leu	Ser	Arg	Leu	Thr	Ala	Glu	Glu	Lys	
				290					295					300	
Glu	Ala	Pro	Ser	Gln	Ala	Pro	Glu	Gly	Asp	Val	Ile	Ser	Met	Pro	
				305					310					315	
Pro	Leu	His	Thr	Ser	Glu	Glu	Glu	Leu	Gly	Phe	Ser	Lys	Phe	Val	
				320					325					330	

Ser Ala

<210> 518

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 518

ccctgcagtg cacctacagg gaag 24

<210> 519

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 519

ctgtcttccc ctgcttggt gtgg 24

<210> 520

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 520

ggtgcaggaa ggggtgggatc ctcttctctc gctgctctgg ccacatc 47

<210> 521

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 521

ccagtgcaca gcaggcaacg aagc 24

<210> 522

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 522

actaggctgt atgcctgggt gggc 24

<210> 523

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 523

gtatgtacaa agcatcggca tggttgcagg agcagtgaca ggc 43

<210> 524

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 524

aatctcagca ccagccactc agagca 26

<210> 525

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 525

gttaaagagg gtgcccttcc agcga 25

<210> 526

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 526

tatcccaatg cctccccact gctc 24

<210> 527

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 527

gatgaacttg gcgaaggggc ggca 24

<210> 528

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 528

agggaggatt atccttgacc tttgaagacc 30

<210> 529

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 529

gaagcaagtg cccagctc 18

<210> 530

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 530

cggggtccctg ctcttttg 18

<210> 531

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 531

caccgtagct gggagcgcac tcac 24

<210> 532

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 532

agtgtaagtc aagctccc 18